

God's Endangered Animals

Awakening Conservation for Future Generations



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ARTS 789

Liberty University

Thesis / Portfolio

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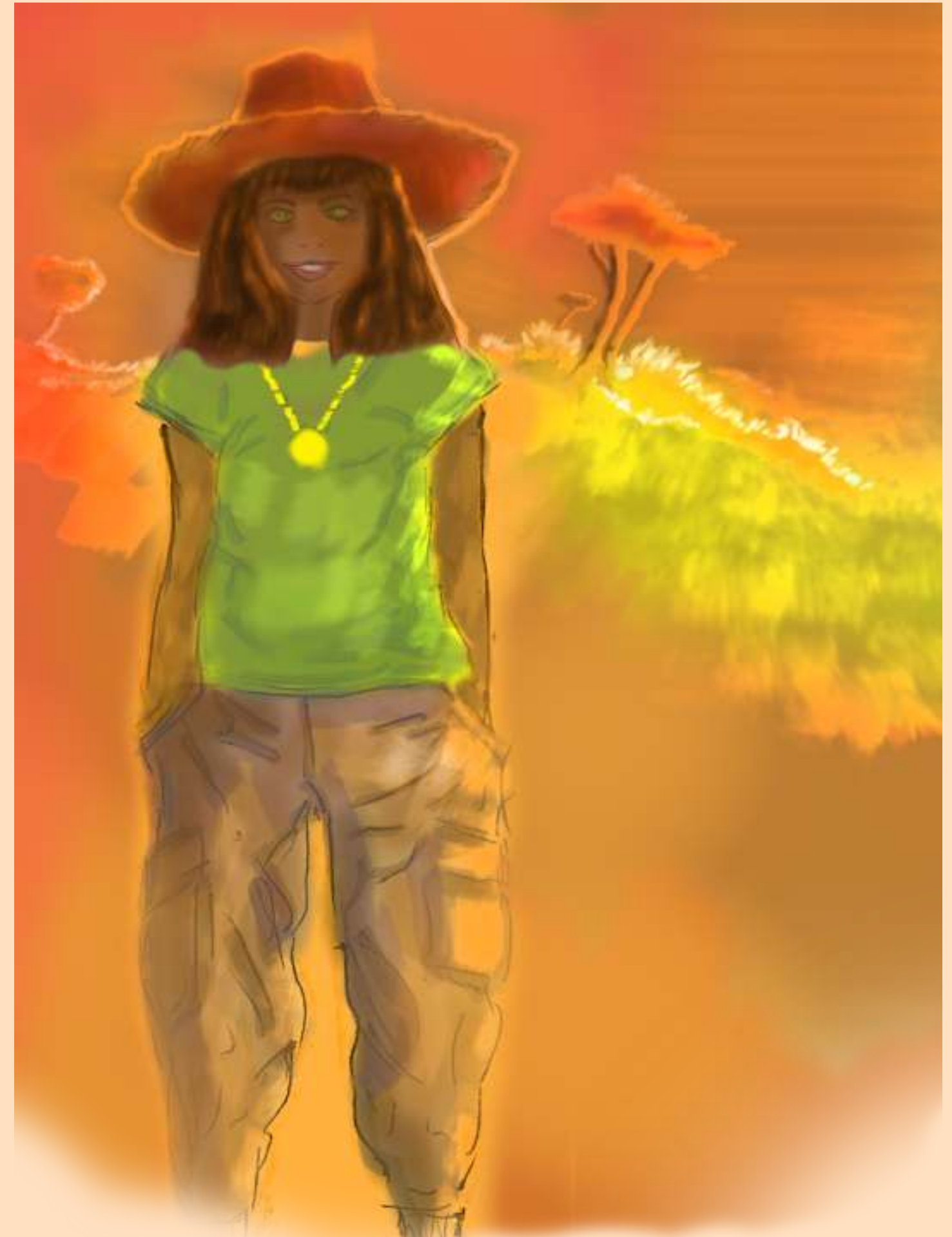


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Abstract

Poaching and illegal hunting have brought several endangered species to the brink of extinction. The elephant population in Africa has been depleted from millions to less than 500,000 known to live in the wild. Ocean species are seeing grave losses with whales having been hunted for so many years, and their numbers not returning to the levels they once were.

The purpose of this thesis is to create a body of work through research and creativity which will demonstrate how the protection of these animals is essential to the earth that God created. All the animals God created were of His design and purpose. It is how nature cycles and continues to provide the earth with the resources needed for animals and humankind to co-exist.

The fear of losing many critically endangered animals will be discussed. Animals that were once safe in their environments are now rapidly being erased from existence.

Mankind's greed and desire to exploit these animals has created a growing threat to their existence. God appointed man to care for them, not destroy them.



Chapter One



Introduction

Chapter One

Introduction

Since I was a small child, I have been in love with the beautiful animals our Lord has created to walk upon this earth where we all were meant to live. I was [REDACTED] began watching shows about exotic wildlife that lived throughout the world. At five years of age, I began to learn about conservation and how important it is to protect these animals from poaching. [REDACTED] they will be [REDACTED] become critically endangered and eventually extinct.

I have had the opportunity to carry my passion for [REDACTED] artwork. My illustrations [REDACTED] from the global community and presented on four occasions at the Disney Family Museum in San Francisco, California. Two presentations touched upon my work and love for endangered animals. One presentation was "Preserving the Animals of Our Earth" with the exhibition taking place at the Diane Disney Miller Exhibition Hall. The elephant illustration on the cover of this thesis was taken from a much larger picture I illustrated for the exhibition for Earth Day, April 22, 2021.

Walt Disney was a conservationist and believed it was important to respect nature and support habitat conservation. He was considered ahead of his time in recognizing the importance of inspiring younger generations to understand and actively protect our natural world (Disney Family Museum, 2021).

It is inspirational that Walt Disney had an interest in teaching younger generations about protecting our natural world. This is my goal for this thesis presentation and research; inspiring young children through my children's books about how important it is to preserve God's beautiful animals.

In the words of Walt Disney, "Conservation isn't just the business of a few people. It's a matter that concerns all of us. It's a science whose principles are written in the oldest code in the world,

the laws of nature. The natural resources of our vast continent are not inexhaustible. But if we will use our riches wisely, if we will protect our wildlife and preserve our lakes and streams, these things will last us for generations to come" (Disney Family Museum, 2021, para 2).

It is important to preserve our earth and all that God created upon it. Mankind was given dominion, and we are expected to protect the animals that God created. The Reverend Billy Graham was once asked if Christians should be concerned about taking care of our planet and the animals that walk among us.

Reverend Graham answered this by sharing, "We know that God created the world, and it belongs to Him, not us. Because of this, we are only stewards or trustees of God's creation, and we aren't to abuse or neglect it" (Billy Graham Evangelic Association, 2020).

The Bible shares in Isaiah 11:6: "The wolf will live with the lamb, the leopard will lie down with the goat, the calf and the lion and the yearling together; and a little child will lead them." As this is God's plan for man and animals to live in perfect peace for the future messianic kingdom, so should mankind protect and live with the beautiful animals God created to walk this earth. As we read Genesis, we know that God commanded Noah to build the Arc and bring the animals male and female upon the Arc to save not only mankind, but the animals God created upon His earth.

More recently, groups such as People for the Ethical Treatment of Animals (PETA) launched Jesus People for Animals which is a program where Christians explore how their belief in God can make safe and good choices that affect animals (PETA, 2014). Another Christian organization is Catholic Concern for Animals (CCA) which is working with the mission for the advancement of Christian respect and responsibility for the animal creation. The CCA has partnered with the World Federation for Animals (WFA) in sharing information and developing focus on key policy issues impacting animals.

This thesis will present extensive research of how God cares about the animals that walk this earth. They are His creation, and He has commanded in His word that mankind should protect and care for these animals. Through the research process, design process, and a lot of passion for God's endangered animals, this presentation will provide [REDACTED] need [REDACTED]

Research Objectives

Because of poaching and illegal hunting, many [REDACTED] world are endangered [REDACTED] extinction. Finding solutions and creating strong methods of protection are needed to save these beautiful animals so that they can continue to walk and swim upon [REDACTED]

This thesis [REDACTED] the peril of endangered species. All humanity should be concerned and actively involved in protecting endangered animals.

For my thesis project, I plan to design two children's books which will teach young children why it is important to save our endangered species.

The Lord loves all of His beautiful creations. By using design, color, and creating illustrations, the message and story of how important these animals are can reach and teach many young children about these endangered species, how significant they are, and the importance of protecting them.

Research Problem

The poaching, illegal hunting, and trophy hunting of exotic animals result in the eventual extinction of the species leaving future generations deprived of an important part of God's creation. Furthermore, the balance of nature is critical to the preservation of these species.

Knowledge Gap

Current information which is not covered in the research of the literature review is punishment for poaching and illegal hunting. This is an area that needs to be expanded and reviewed by individual countries and governments, with a worldwide moratorium that might provide more protection for innocent and endangered animals.

Some fees for poaching and illegal hunting have been as low as \$100.00 (Smola, 2020) which certainly is not going to deter anything. The lives of these animals are worth far more. One hunter poached a male buck in Texas and was fined \$53,000, which was considered very high (Wildlife Management Institute, 2023). However, poaching and illegal hunting is breaking the law and taking a life. Levying more extensive punishments for poaching could drastically reduce the occurrences of this crime.

Additional studies conducted by The Wildlife Management Institute with the Boone & Brockett Club are being considered that will allow individual countries and governments to establish laws that will protect endangered animals.

The need to punish more severely is only now being considered as all other efforts have been difficult to enforce. For example, in Africa, many poachers who are caught can find themselves in jail. However, this is not working as poachers claim this is ineffective (Ro, 2020). Individuals who commit poaching have shared what they earn from the sale of two rhino horns is more than anyone else in their community for an entire year.

Current policies on how to curtail poaching and illegal hunting need to be addressed. Until the punishment meets the crime, poaching will continue. This is an area where strong laws should be explored to save endangered species. Much more research needs to be conducted in this area demonstrating statistical and analytical reasons and approaches as to how to stop poaching.

Significance

The need to protect animals from poaching and illegal hunting is essential, as some species are so critically endangered that it is believed they will become extinct before scientists and conservationists have a chance to fully address the threat.

off the [REDACTED] the most endangered marine mammal with less than 20 remaining in the wild (NOAA, National Oceanic and Atmospheric Association, 2023).

Statement

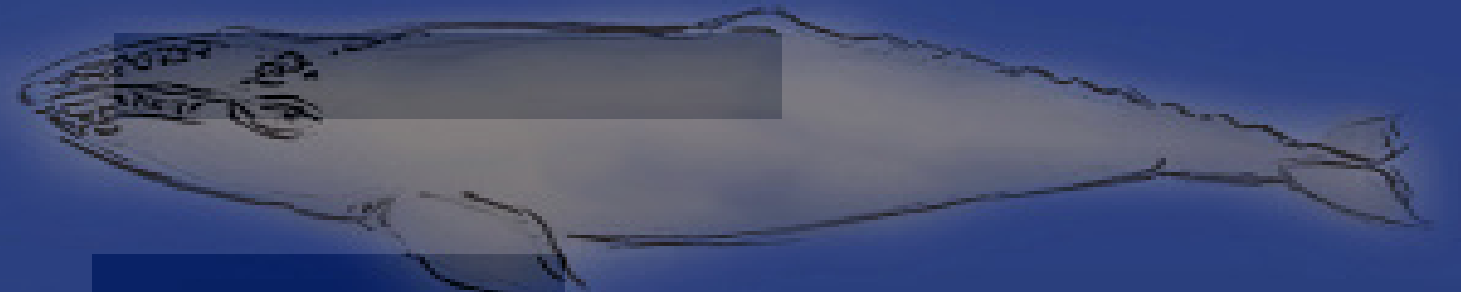
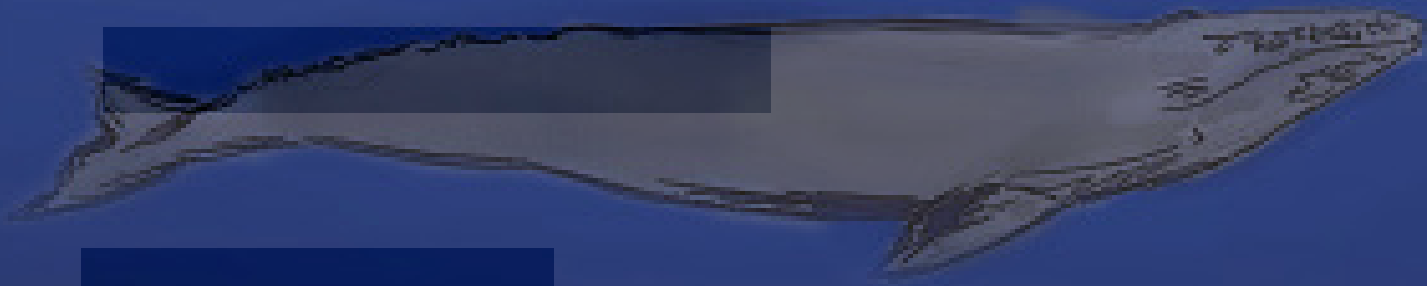
Individuals who are affected by the research and topic of this thesis project will be environmental groups such as Clearwater Marine Aquarium (CMA), [REDACTED] facilitates sick and injured [REDACTED] the African Wildlife Foundation (AWF) has worked at preserving the elephant and its habitats by supporting wildlife law enforcement working with officials, mitigating human-wildlife conflict, and raising local and global awareness of the elephant population decline and ivory trade. Furthermore, the San Diego Zoo Global has three world-class facilities located here in the United States which could benefit from this project. I will develop children's books that demonstrates the importance of the survival of these animals to our planet. Through these books, children will learn to appreciate and love these animals for generations to come.

This visual component will demonstrate how important it is to protect endangered animals. There will be an emphasis on God's love for His creation and the need for man to protect them. Two children's books will discuss the elephant and the rhinoceros.. There will be an emphasis on God's love for his creation and the need for man to protect them.

Research Questions

1. Is protecting endangered animals of interest to younger generations and what design approaches will demonstrate the importance of saving these species?
2. Should local governments make decisions as to how to protect endangered species?
3. How might Artificial Intelligence (AI) be used to capture poachers and illegal hunters and is AI effective in locating poachers and illegal hunters?
4. Is facial recognition for animals and the use of drones proving to be capable of protecting endangered species from poaching and illegal hunting?
5. Can poaching and illegal hunting as demonstrated through art, such as the works of Andy Warhol, assist the curtailing and illegal hunting of certain species?





Chapter Two

Literature Review

Chapter 2

Literature Review

The purpose of this literature review will demonstrate primary and peer-reviewed books and articles, in addition to world renown organizations and websites devoted to saving exotic animals from extinction. Extensive research discussing the plight of the elephant and the rhinoceros will demonstrate how illegal hunting and poaching has depleted the population of these majestic animals. In addition, endangered ocean mammals are suffering from illegal hunting, poaching, and overfishing. Positive steps being taken by conservation groups and activists will be discussed in this literature review, along with modern technology that is being developed to alleviate loss and increase the numbers of these animals.

Endangered African Wildlife -

The Elephant

The African Wildlife Foundation (AWF) has dedicated itself to conserving Africa's elephant population. The AWF is headquartered in Nairobi, Kenya and has been bringing awareness of the dilemma of the African elephant, the poaching trade, and illegal hunting of elephants for the last 60 years. It is interesting to note that the elephant habitats in Kenya have seen human and wildlife populations becoming closer in proximity. The AWF believes educating people about the elephant and its habitat, in addition to having humans and elephants living closer together will continue to bring awareness of the need to protect the African elephant from extinction (AWF, 2020).

The AWF is on the forefront of finding new ways to block and intercept the ivory trade and illegal hunting and exporting of tusks which are stripped from the elephants. One effective approach, is very similar to the police using canine assistance to seek out drugs. The AWF is using canine throughout the world to canvas borders and ports as well as exits and entries into countries to detect illegal items and assist law enforcement (AWF, 2020).

Canine detection and tracker dogs are proving to be an excellent resource in deterring poaching export in high-risk areas.

For years, museums have exhibited ivory in the form of statues. The systemic killing of the African elephant has placed it on the critically endangered species list. It is essential that museums, collectors and other organizations are prohibited from profiting from the death of these animals.

Research conducted by Drayman-Weissner (2018) addresses saving the African elephant and stopping interstate commerce and export of ivory. The Endangered Species Act (ESA) which was signed into law originally in 1973, now only allows an antique made of ivory to be bought by a museum if it is 100 years old or older (Drayman-Weissner, 2018, p. 69). This is a good start to putting a halt to illegal poaching and hunting of elephants for their tusks. Museums now require paperwork that detail the history and age of any ivory artwork or display piece for their exhibits. Museums take these steps to protect endangered elephants as it requires all parties to provide appropriate information identifying elephant ivory artifacts.

It is important to realize and educate the uniqueness of the elephant. If left safely in their natural environment, they can enjoy a long and healthy life. Elephants can live to be 70 years of age. The African bush elephant and African savanna elephant are the longest living mammals on the face of the earth, next to human beings (Nature Conservancy, 2020). These gentle creatures live and travel spans of open savanna to the desert. They are found throughout most African countries. It is important for education programs to teach that elephant herds have a matriarchal leader who is the eldest female in the herd. These herds consist of related females and their young. Male elephants are considered solitary and only join the herd during mating season. When a female is expecting a calf, the gestation period is 22 months and is the longest period of gestation among mammals.

Both male and females have a trunk with more than 40,000 muscles and tendons. The elephant's trunk can lift more than 400 pounds. These unique animals can manipulate small objects with two finger-like projections on the end of their trunk. Elephants take water through their trunk and blow it into their mouths for a drink or cover their backs to cool themselves with a mist (Nature Conservancy, 2020).

Poaching and illegal hunting of elephants is mainly because of their tusks. Both male and female elephants have visible tusks. These tusks are used for survival and poaching unnaturally removes these tusks. The elephant population is highly endangered and the need to stop poaching and illegal killing of these wonderful animals must be stopped.

Poaching must be stopped as the damage to African bush elephant populations sees an estimate of 25,000 elephants being lost every year (Nature Conservancy, 2020). Elephants must be protected and allowed to live the life God planned for them.

When considering the size of the elephant, one must consider these animals need space to wander. When elephants move about for long distances, it is important that the land where they live stay healthy and safe. Elephants do not understand or recognize a 'border.' They roam freely upon the land where they were born. This could be miles and miles of open savanna and desert regions. When land is used by humans also, it is imperative that man shares it with the elephant and the African government should oversee communities are living safely along with the elephants (Gill, 2021).

Brutality of overhunting and poaching certainly has been on the forefront of many scientists, activists, animal lovers and conservationists for many years. However, the extent of this brutality is far more terrible than many people realize. People for the Ethical Treatment of Animals (PETA) has been caught up in controversy through the years. Critics of the organization claim they approach animal activism with too much anger and are caustic where their work is concerned. However, PETA is also very much at

the forefront of fighting animal cruelty and has managed to capture this cruelty on camera.

PETA has exposed terrible conditions and treatment of animals both in the wild globally and domestically. They campaign to fight for animals' rights and protection. PETA has exposed tragic situations where baby elephants are removed from their mothers, tied down, and beaten with bull hooks and other instruments to train the elephant into submission (PETA, 2023).

Elephants are family oriented and their young stay close to the family with the females never leaving the herd. Male elephants depend upon their mother and the herd until they are ready to leave and begin a solitary lifestyle at ages 14 or 15 years (Maudsley & Duggan, 2023).

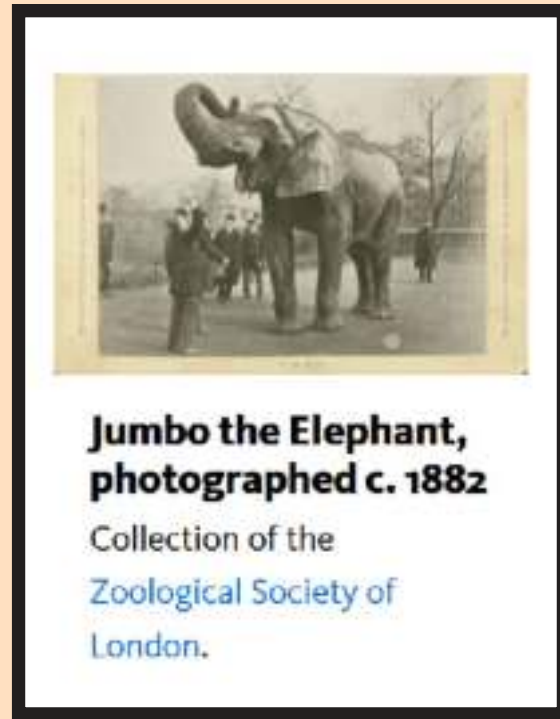
When an elephant loses a family member, they mourn much like humans do. Perhaps one of the saddest emotional discoveries concerning elephants is they suffer from post-traumatic stress disorder (PTSD).

Elephants are extremely social animals (Maudsley & Duggan, 2023). Elephants live in social groups where they are cared for and learn from older family members how to live in the wild. They have memories of close bonding and love. The baby elephant or calf becomes the center of the world for their mother and is loved by the family members their entire life. "During the first year of life, baby elephants won't be more than a few meters away from their mothers" (Vicki Fishlock, Amboseli Elephant Trust, as cited by Maudsley & Duggan, 2023, para 4).

Years of research have brought scientists to discover that elephants can suffer from PTSD. When an elephant is locked up, chained, and unable to move in small enclosures or solitary confinement, it is believed they become mentally depressed.

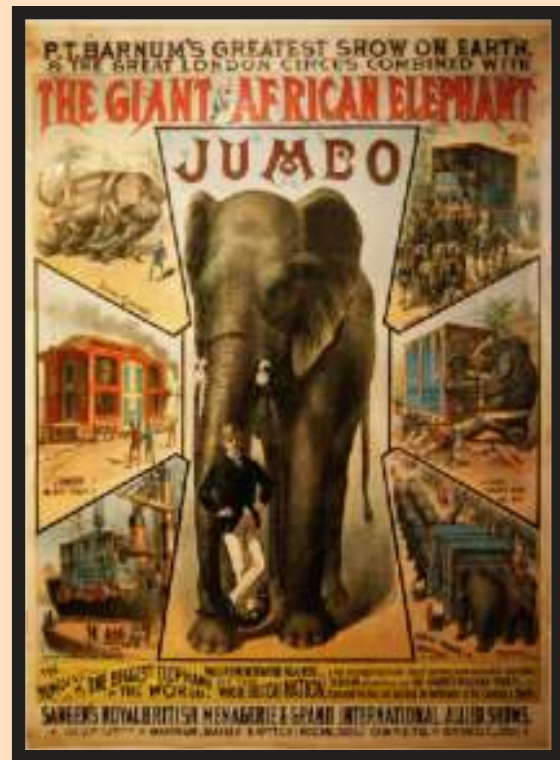
The history and story of the famous circus elephant, Jumbo, has been studied for 100 years. It is believed after much research that Jumbo, who saw his mother murdered when he was still very young, her body slaughtered and stripped of her tusks left a terrifying impression on the young elephant. He was taken far from the herd and home he knew. Jumbo was chained in a stable at zoos and was forced to perform in a circus. Jumbo gave rides to dozens of people at a time, which wore his body down so rapidly that his bones and joints resembled at 24 years, the bones of an elephant of 60 (Maudsley & Duggan, 2023).

It is believed that Jumbo suffered from PTSD. Elephants have memories, and the death of his mother and being separated from the herd affected Jumbo. Essentially, Jumbo's life was stolen at an early age where he was emotionally wounded and became depressed. History confirms Jumbo's life and his mother's violent murder. Jumbo was isolated from other elephants at the London Zoo and chained in a stable. He suffered nightly rage, destroyed the interior of his elephant house, and through this, broke his tusks (Maudsley & Duggan, 2023, para 3). In St. Thomas, Ontario, Canada, in 1885, while traveling with the circus, Jumbo was hit by a train and killed. It is believed in the moment he was able to move freely enough from his chains, Jumbo chose to commit suicide. Although this was written down as a train accident, theorists who have studied Jumbo's history differ. Jumbo lived a short and abused life for an elephant (Jumbo, 1861-1885).



**Jumbo the Elephant,
photographed c. 1882**
Collection of the
Zoological Society of
London.

Jumbo the Elephant, photographed c. 1882
Collection of the Zoological Society of London.
Photograph of Postcard from Museum of London.



Jumbo the Elephant, photographed c. 1882
Collection of the Zoological Society of London.
Photograph of Postcard from Museum of London.

Endangered African Wildlife -

The Rhinoceros

The horns of the rhinoceros, much like the tusks of elephants, are seen by many as a way of making money. Again, this cruelty has placed the rhinoceros on the critically endangered list. Groves, Fernando, and Robovsky (2010) in their article, *The Sixth Rhino: A Taxonomic Reassessment of the Critically Endangered Northern White Rhinoceros* discusses the two forms of the white rhinoceros found in northern and southern Africa. The Northern rhinoceros has been hunted and has become critically endangered. Conservationists are still finding the Northern rhinoceros in peril. According to Fernando and Robovsky (2010) the Southern rhinoceros has been recovering from near extinction to a population of a few thousand.

In a valiant attempt to protect the rhinoceros, investigative reporter John Stossel (2017) developed a video titled *Stossel: Save the Rhinos! An entrepreneur has a plan to save the rhinos from poachers, but environmental groups hate his idea.* In this report, Stossel shares on YouTube the fact that poachers are hunting and killing the rhinoceros for the beautiful horns that grow from the rhinoceros' head. Each horn can bring as much as \$300,000 (Stossel, 2017). Some of these horns are carved into ornaments and some ground up and sold as medicine.

In this video, Stossel interviews Matt Markus who started a company called Pembient. The idea behind Markus's company is to produce artificial rhinoceros' horns and flood the market with these horns. The reasoning behind this is when there is an abundance of merchandise, this will drive the price down. When the product has become inexpensive from fake merchandise, poachers will not be able to make the money they are used to and will stop killing the rhinos. Environmentalist groups are against this 'fake rhino horn' and feel it creates a problem in that the animal becomes a commodity.

South Africa tried legalizing rhino farming. Farmers raised rhinos, put them to sleep, cut the horns from the rhinos and sold them. The rhino population quadrupled in two decades. However, in 2008, South Africa banned sales of the rhino horn and poaching shot up again (Stossel, 2017).

The mighty and powerful rhinoceros is not in danger from other animals. Given its large size and body, the rhinoceros is a plant and grass eater who when left alone, is not known for bothering anyone and can live to be 45 years old. The habitats of the white and black rhinos often cross paths. They live in the grassy areas and floodplains of eastern and southern Africa. The rhino spends much of their time grazing and only sleeps during the hottest time of the day. The rhino is a solitary creature and only occasionally will be seen in groups called 'crashes' (Bradford, 2018). The 'crash' consists primarily of female rhinos and their young.

The rhinoceros does not breed often, perhaps every two and a half to five years. Gestation periods are 15 to 16 months, and the rhino has only one baby at a time, although they can have twins. Calves stay with their mother for about three years before venturing out on their own. Presently, the greatest threat to the rhino is poaching and trophy hunting.

Other Endangered Animals

It is a tragic fact that elephants and rhinoceroses are at the top of the critically endangered species. However, when considering the vast number of animals walking the earth globally, far too many are succumbing to depleted numbers due to overhunting, poaching, and habitat destruction, all brought about through man's doing.

The pangolin of Africa has been hunted for generations as a food source and is considered a delicacy in Southeast Asia. The beautiful scales of the pangolin are used for medicinal practices in China. Much like the rhinoceros' horn and elephant's tusks. Poachers have trapped and captured this defenseless animal to the brink of extinction. Diggs (2023) reports in the last 15 years the population of large mammals in the Gorongosa has shrunk by 95 percent.

The pangolin population has dropped by 80 percent over the past two decades (Diggs, 2023). Pangolins are harmless and defenseless creatures. They are bashful and become easily frightened. They will curl up into a tight ball, their scales offering them their only defense. Poachers deliberately scare the pangolins into the open by setting fire to their burrows or battering them out of trees with sticks and clubs. The scared and stunned animals roll up and become compact. They are then scooped up and shoved into a sack and carried away. They are being hunted only for the scales on their bodies. Pangolins are dropped into boiling pots of water while alive to make the scales easier to pluck. Along with elephant tusks, the scales are shipped as wildlife contraband.

There has been a war raging for the last 15 years in the Gorongosa region of Africa. In addition to the pangolin being poached, antelopes have been slaughtered to feed troops in the area and elephants have been killed for their tusks to trade for guns to keep the civil war supplied. This is a man-made destruction that is depleting and depriving the world of God's beautiful creatures needlessly.

According to the World Wildlife Fund (WWF) (2023) many endangered species are in peril due to humans who are behind the current rate of species extinction. The WWF reports humans destroy wildlife 100 to 1,000 times greater than what is natural to nature (WWF, 2023). Since 1970, the average rate of decline is 69% in species populations.

The WWF has been working for the past 60 years to find solutions that will save many species. Finding solutions is imperative to protecting endangered species from poaching, hunting, and landscape destruction. It is important to work in regions throughout the world with people around the globe to develop innovative solutions that protect communities, wildlife, and the place in which they live (WWF, 2023).

Finding ways to protect both land animals and wildlife is essential. The WWF additionally works protecting ecosystems and biodiversity that can be found in oceans around the earth where whales, dolphins, sharks, and fish need to be safe and remain healthy, to live and keep the

oceans of our planet functioning as they were created to do. Mammals, along with fish that swim in the oceans are endangered and earth is a water planet. The need to protect our oceans and the creatures who live there is vital.

Endangered Ocean Mammals

In earlier centuries, whaling brought about near extinction throughout the world. The International Whaling Commission (IWC) began in 1982 and set a moratorium against commercial whaling which has saved the lives of many whales. However, Japan, Iceland, and Norway are hunting whales and brutally killing these beautiful creatures of the deep. Whales are endangered due to vessel strikes, being entangled in fishing gear, ocean pollution, and human-created habitat loss and loud noises (Humane Society International, 2023, para 2). The sonar from surveying ships bounce off the ocean floor to map it to lower in wind turbines, disrupts the whale's sonar and causes them to beach themselves. These loud noises can blow out the whale's ear drums.

In the Faroe Islands in the North Atlantic, small whales and dolphins are hunted because of the whaling season's annual drive that takes place each year. These drives have killed entire schools and family pods. This includes pilot whales, a small whale which is a member of the dolphin family, for their meat. Several populations of whales remain in danger of extinction. The North Atlantic right whales have only 300 to 400 whales left in existence. In the year 2018, no young were reported to have been born (Humane Society International, 2023).

The Humane Society International is working hard to save whales from being hunted. The Humane Society International encourages whale watching. This has become a two-billion dollar a year industry which attracts more than 13 million people annually (Humane Society International, 2023, para 9). Whale watching is considered a safe and ethical alternative income source.

The United States needs to step up its efforts and create laws that will better protect the lives and living conditions of dolphins. Many dolphins are kept in captivity, and although they thrive more easily than whales because of being considerably smaller, they still require appropriate living conditions and safety. Presently, there are 41 species of dolphins with five species being endangered (Barrantes 2021 as cited in World Animal Protection, WAP, 2023). The Atlantic Humpback dolphin is considered 'critically endangered' with its greatest threat being caught by fisheries. This dolphin is hunted off the coast of West Africa and it is believed only 1,500 of these dolphins are left in the wild. The Amazon River dolphin or the 'pink river dolphin' is endangered because they are hunted for fish bait, with poachers hunting and killing these animals for their fatty blubber as bait for other prey.

The Baiji dolphin is nearly extinct, as it has not been documented by sightings since 2002. It is on the critically endangered list; soon to officially become extinct due to noise pollution, overfishing, and entanglement in nets. The Baiji dolphin will be the first dolphin to become extinct because of humans (WAP, 2023).

The Maui dolphin has only 55 surviving members in the wild and is critically endangered. This is the smallest dolphin in the world and are slow breeders. Females have one calf every two to three years. Fisheries have hunted this beautiful creature to near extinction. The fifth dolphin on the endangered species list is the South Asian River dolphin. It is believed less than 5,000 of these dolphins exist in the wild because of water development.

The Atlantic humpback dolphin is found off the coastal Atlantic near Africa. This dolphin has a range from Angola in the south and extends to Western Sahara in the north. These dolphins live in shallow waters which can include lagoons, mangrove channel, bays, and estuaries, along with sandy coastlines where the surf swells.

These dolphins are easily captured. They are killed and used for shark bait, in addition to food for humans in some countries, which makes them worthwhile to be targeted (Minton et al., 2022).

Presently, because of human activity, some scientists believe approximately 40 percent of the species that live on planet earth could be extinct by 2050. This is due, to what scientists refer to as the Age of Exploration (Phelan, 2022, Sept). With modern society, exploration has become easier. Reaching and harming animals in far-off areas of the world has brought about threats and endangerment. The threat of extinction to the African elephant and rhinoceros is so great that the possibility of these animals reaching 2050 is in question.

Off the Gulf of California lies an area that is filled with fish and shrimp. This area of the coastal region of the United States sees fishing as a major source of income. It is unfortunate that a quiet and rare porpoise named the Vaquita or Gulf of California harbor porpoise also lives in these waters. The Vaquita is the most endangered marine mammal with less than 10 remaining in the wild (NOAA, National Oceanic and Atmospheric Association, 2023).

This shy animal is about five feet long and is small for the dolphin, whale, and porpoise family. If left to live in peace, the Vaquitas can live at least 21 years. The Vaquita reaches sexual maturity at three to six years old, with a pregnancy lasting 10 to 11 months. It is believed these mammals only give birth every other year to a single calf. Consequently, the number of this species is in grave danger of going extinct far too soon.

Scientists began working with the Mexican government, agencies, and foundations to protect the Vaquita off the Gulf of California. Fishing has become an endangerment for the Vaquita; consequently, the Mexican government paid fishermen for loss of income for two years and halted fishing in this specific area. Scientific studies and monitoring the Vaquita porpoise population using ship-based monitoring and sound-based detectors (NOAA, 2023), have been ongoing with the hope of finding solutions that will protect this porpoise from extinction.

Many have the hope that these scientific efforts might lead the Vaquita to turn their populations around. This is a serious situation, with the Vaquita being named the most endangered marine species.

It is important to keep mammals living in the oceans alive and well as they deserve to be safe in their environment. The health of the oceans and waters that cover the earth and the world we live in relies on these animals to stay healthy and living. Whale excrement is a nutrient pump for rainforests, plankton, as well as microscopic organisms that become food for smaller fish (NOAA, 2021, Feb). Whale excrement helps put nutrients in the water that assist plankton in their growth, and the plankton form the backbone of the entire oceanic system. These nutrients enrich other animals such as birds, who eat and carry the nutrients, enriching all that they encounter. Thus, mankind benefits from this circle of nature and life that God has created.

Researchers and Sanctuaries

Clearwater Marine Aquarium (CMA) in Clearwater, Florida has been involved with rescue, rehab, and release of marine animals. CMA rescues and rehabilitates sick or injured animals because they are suffering from an illness or severe injury (2023, para 1). Many of these animals are found in the waters of the west coast of Florida by residents, fishermen, park rangers and some visitors.

Education is clearly a part of dolphin protection. CMA was the subject of a wonderful motion picture titled *Dolphin Tale*. Winter, a bottlenose dolphin was first rescued and brought to CMA in Florida after she became entangled in a crab trap rope. This cut off circulation and the young dolphin had to have her tail amputated. At the time, in 2005, experts around the world recommended Winter be euthanized; however, CMA and the many specialists working there wanted to give her a fighting chance. Through trial and error, a prosthetic tail was finally designed that worked and allowed Winter to swim freely in her enclosure and home at the aquarium. Winter lived in peace at her home in Florida from 2005, welcomed children for

years who suffered from various disabilities and illnesses to visit with her at Clearwater Marine Aquarium, starred in a movie in 2011 and again in 2014, but passed away of a gastrointestinal infection at age 16. This is young for a dolphin, but the impact this little dolphin had on so many lives in her 16 years is far more than most humans make on others in a lifetime. Mankind needs to take lessons from animals and nature. God created so many creatures to be listened to and observed, not abused, lamed, hunted, or poached.

CMA works with the National Oceanic and Atmospheric Administration (NOAA), in addition to local marine life rescue organizations. There is a specialized team of trained personnel which includes staff biologists, marine veterinarians, interns, and volunteers. In addition, CMA offers educational programs that teach children and adults about ocean creatures, and how to keep the oceanic environment healthy. The CMA Research Institute was established in 2019 with the intention of expanding conservation and research for the protection of species and habitats. The CMA Research Institute focuses on the conservation of manatees, dolphins, sea turtles and the endangered right whales.

Research completed by Travers et al. (2019) considers studying who is doing the hunting. According to Travers et al. (2019) many people in the world believe individuals who hunt do so because they are poor and want to eat. However, this research found that the poorer a household was found to be, the less likely they were to illegally hunt to further the benefit of their household (p. 1301).

The researchers found that legal hunting of non-endangered animals among the poor to eat was a common thread; however, illegal hunting of endangered animals was one for profit. The risks continuing as illegal hunting on wildlife national parks find only small numbers of potential crimes are stopped by national park rangers. This leaves many animals, such as the elephant, in danger even though they are roaming in a protected environment and wildlife park. When considering this research, one must note that

continual and more stringent efforts must be used to protect the endangered species that live in and are native to national parks, as these species could possibly become extinct if excessive hunting and wildlife crimes do not stop.

To protect endangered animals, poaching and trophy hunting must be seriously scrutinized. Hernick (2021) suggests banning imports of hunting trophies and endangered wildlife. At one time, trophy hunting was considered a 'sport' and well-known men such as President Theodore Roosevelt and Ernest Hemingway were active participants. Through the years, trophy hunting was not only popular, but became known for its monetary rewards.

In 2015, a well-known leader of a studied pride of African lions in Zimbabwe, was tracked making Cecil away from his pride. An international cry for stopping trophy hunting was once again ignited. Politicians began working on and 'enacted' regulations to restrict importing these trophies. In 2017, President Donald Trump referred to trophy hunting as a 'horror show' (Hernick, 2021, introduction, para 2). However, the United States, as with all nations, cannot regulate the killing of animals outside of their borders. Only regulations for importing these animals and animal parts from abroad can be regulated.

Since Cecil the Lion was hunted and killed, several nations have enacted laws and regulations that will restrict the import of trophy hunted endangered species. Australia, France, the Netherlands, and the United Kingdom have all banned importing lion trophies, elephants, cheetahs, lions, hippopotami, white rhinoceroses, and polar bears.

Hernick (2021) discusses countries considering a ban on trophy hunting and importing these endangered species. Modern laws which regulate trade are examined as they were written to protect endangered wildlife. In addition, trophy hunting is detrimental to the survival of many endangered animals.

Hunting animals for sport is barbaric and breaks up family units of animals that otherwise are not hurting mankind, but living the lives they were created for by a loving and benevolent God.

Educating adults on animal cruelty, the evil of poaching and trophy hunting must be a global effort, as when adults learn this, children will mirror this and grow up protecting animals. The San Diego Zoo Global has three world-class facilities. These are the San Diego Zoo, the San Diego Zoo Safari Park, and the San Diego Zoo Institute for Conservation Research. All three campuses work with conservation with more than 100 conservation field projects in 35 countries (San Diego Zoo Global, 2023). The mission of the San Diego Zoo Global is committed to saving species worldwide. This is done by bringing individuals together with expertise in animal care and conservation. The vision of the San Diego Zoo Global is "We will lead the fight against extinction" (Vision Statement, San Diego Zoo Global Website, 2023).

Conservancy, Education, and Legalities – Steps for the Future

After conservationist Steve Irwin died, his wife Terri continued his dream and today along with her daughter, Bindi, and son Robert, the family's conservation dream is "to save one, save the species" (Wildlife Warrior, 2023, para 1). Their Wildlife Warrior conservation has nine global conservation projects, three conservation properties, and global donors and supporters (Wildlife Warrior, 2023). The Wildlife Warrior conservation works at preserving many species such as the Sumatran tiger, whale sharks, koalas cheetahs, Cambodian elephants, and the Black rhinoceros to name a few.

Part of the Wildlife Warriors is the affiliation with the Australia Zoo Wildlife Hospital which sees in a 12-month period between 9,000 to 10,000 animals and provides lifesaving treatment. This is one of the world's largest and busiest wildlife hospitals.

In addition to the Australia Zoo Wildlife Hospital, Terri Irwin, who grew up in Eugene, Oregon has incorporated wildlife assistance by continuing her work in America where she started a hospital that sees 1,200 animals each year. These animals can range from owls to squirrels, skunks, and cougars.

There needs to be regulation of selling poached animal skins online. The Sumatran Tiger is highly endangered as its skin sells for extremely high prices on the black market. Furthermore, illegal logging and agriculture has destroyed much of the Sumatran's natural habitat and made food scarce. These beautiful animals must be protected and yet, these practices continue.

The Wildlife Warrior conservation continues to fight for the Sumatran tiger's protection. More and more laws are being developed and issued concerning wildlife animals' protection. Species who are facing extinction from poaching and illegal hunting, in addition to environmental habitat destruction must continue to be protected (Frefogle, Goble, & Wildermuth, 2019). These three authors have compiled a book titled "*Wildlife Law: A Primer (2nd ed.)*." For too many years, animals in the wild have been exploited for monetary purposes.

The laws being developed address extinction as presented in *Wildlife Law*. It is important to prohibit harm to endangered animals and this international law prohibits the taking of an animal on the endangered species list outside of the country where they were born and live. At this point in time, special permits must be obtained and are only issued for zoos, special programs, and agencies. When this is allowed, the animals must be legally transported in a safe fashion, always protected while being transported and housed in a humane fashion. Habitats must be designated to meet standards for endangered wildlife so as not to jeopardize the existence of the animal (Frefogle et al., 2019, pp. 235-236).

Educating children and adults is an important beginning which will allow wildlife conservation to continue to grow. Awareness and facing the brutality of poaching and illegal hunting must be seen for what it is. This is not a natural way for animals in the wild to live. Humans might be born with the ability to think of themselves as justified, but there is no room for this cruelty in the world and on the earth where we all live and exist side by side.

The National Geographic Society has produced educational programs, television, magazines, and many expeditions throughout the world. These programs offer firsthand glimpses into the lives of endangered species. By educating children and adults about extinction, more and more individuals will see how saving our animals must be a priority.

Education is no doubt one of the greatest outreach opportunities for preservation and conservation purposes. Protecting endangered species should be a priority around the world. It is important to make habitats secure and allow animals to roam safely within the regions and domains that were created for them specifically by God.

Save the Elephants has developed education programs that they share with communities that live in the same regions as the elephants. These communities are learning to co-exist with the elephant while also saving the elephant's habitat. In addition to these outreach programs, Save the Elephants (2023) additionally offers a research library. Here over 8,000 academic papers, articles, and theses related to the African elephant are kept. The African Elephant Library (AEL) works alongside Save the Elephants and the African Elephant Specialist Group (AFESG) as part of the International Union for Conservation of Nature (IUCN/SSC).

Many might remember growing up hearing about the National Wildlife Federation, which first began protecting wildlife and habitats in America in 1936. Protecting and educating about wildlife and endangered species can begin at home. In America, children who learn about the American bison or buffalo and the importance of the American eagle, will grow, and learn about wildlife preservation throughout the world.

In 1959, the National Wildlife Federation published a book about a cute and talkative raccoon that educated children about conservation. In 1967, the National Wildlife Federation started a magazine which they called Ranger Rick which in 2017, celebrated 50 years of publication. Ranger Rick is geared toward children of 7 years and above and has been teaching conservation and saving habitats is in our world. Further education about hiking and living safely in the great outdoors are all a part of this inspirational magazine for children. It has been so successful that a second magazine titled "Ranger Rick Jr." was started for younger children ages 4 to 7 years old.

There are never enough early education programs, and the more that are developed and can reach children and adults, the more successful wildlife conservation will be. The Sierra Club is also located in America and is one of the largest environmental organizations with millions of members. The Sierra Club (2023) is working to protect more than 1,747 species of plants, fish, and wildlife in the United States. These species additionally come under the Endangered Species Act as of 2019. Protecting the wild regions of the earth and preserving habitats is an essential and important educational project.

Conclusion

This thesis literature review has established poaching, illegal hunting, and trophy hunting as barbaric, and with increased measures including education, stronger penalties, in addition to continually updating laws, animals on the endangered species list can better be preserved for future generations to enjoy. Protecting the dwindling populations of God's beautiful creatures is a moral obligation, a benefit, as well as a privilege to saving our planet and the animals that walk and swim among us globally.

Research is ongoing with organizations throughout the world teaming up with scientists and conservationists to learn as much as possible and protect these species.

Research Method

Poaching and illegal hunting has become such a global problem that steps to protect endangered species are leading to more and more high-tech technology to save these animals from leaving our earth.

Researching this topic and conducting extensive literature reviews has led to identifying case studies that will take the research into solving the problem of poaching and illegal hunting further. Case studies specifically detail the subject being studied to solidify in-depth studies of how endangered species need to be protected. Three case studies were conducted that focused on the problem of endangered species and possible solutions.

Case Study – One

Protection Assistant for Wildlife Security (PAWS)

Scientists are studying the use of Artificial Intelligence (AI) to combat poaching. It is estimated 96 African elephants are killed daily which is causing conservationists to look at AI and the advancements that are taking place. One project titled PAWS which stands for Protection Assistant for Wildlife Security is allowing wildlife officials to go up against these poachers. In 2013, Milind Tambe, a professor of computer science at the University of Southern California began working on an AI solution for poaching. Tambe became interested in the threat of extinction for animals when he went to a Global Tiger Initiative conference. Professor Tambe put together a team of students to work on what was developed into PAWS where an algorithm was created based on security games (Snow, 2016). The idea of game theory is where a defender tries to optimize limited resources to prevent attacks. Professor Tambe has built algorithms used by Homeland Security, the Transportation Security Administration, and the Coast Guard (Snow, 2016). The algorithm predicts where resources like agents and surveillance would best be placed to interfere with smuggling and terrorism. PAWS breaks down data and correlates it to geographical information that looks closely at wildlife parks. This information can include roads, rivers, slopes of the land, rainfall, distances from borders, and wildlife presence. The software produces a map that breaks a part down into squares (1kilometer x 1 kilometer) and predicts the likelihood there will be poaching activity in each square (Zewe, 2020).

How might AI be used to capture poachers and illegal hunters?

Some challenges with AI is the human aspect of greed which pushes poachers to monetary reward. PAWS by itself cannot stop all poaching; however, the software has the potential to be meaningful in combating illegal poaching and hunting (USC, 2019). The wildlife parks where poaching is taking place are very large. Many

rangers have been patrolling these parks for many years with focus on certain areas. Some areas of the parks go completely uncanvassed. The hope is AI will assist with pinpointing poaching activity in other areas and alerting rangers and authorities earlier.

Is AI effective in locating poachers and illegal hunters?

Using AI to help with poaching is producing positive results. In 2015, South Africa reported poachers kill one rhino every eight hours, which resulted in three rhinos a day (Rowan 2021). When AI assisting the rangers first began, South Africa saw one rhino killed every 15 hours by poachers. Clearly, challenges still lie ahead as the rhino population still decreased in 2015. Artificial Intelligence, along with very strict punishment needs to be incorporated.

Can AI be used to track animal patterns?

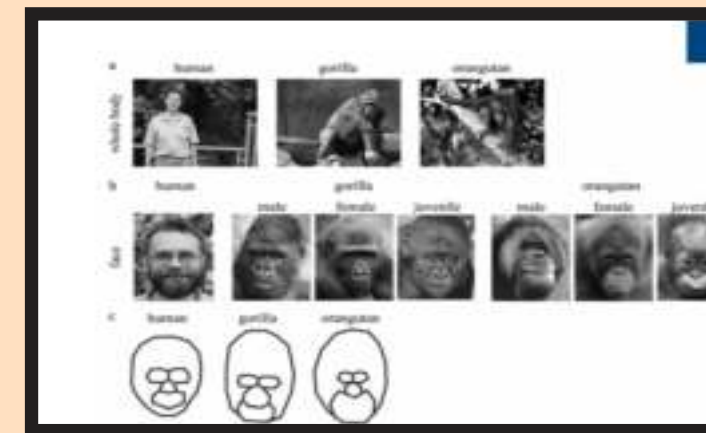
Scientists and rangers are better able to track certain animals and keep track of where they move about through facial and pattern recognition technology (Edmond, 2019). AI technology allows researchers to track individual animals and monitor populations and migrations. More recently, distinctive markings have been a challenge, as cheetahs and leopards, along with giraffes all have similar but distinctive markings. Facial recognition is being used for what is called The Lion Identification Network of Collaborators (Edmond, 2019) where a computer can look at a high-quality photo, zoom in and identify whisker spots.

Penn State University and the Wild Nature Institute is studying deaths and movements of more than 3,000 giraffes in northern Tanzania. Giraffes are hunted for meat and the giraffe population has seen dramatic decline in recent years.

Using Artificial Intelligence to assist with poaching is proving to be beneficial. Through algorithms and software, computers are pinpointing areas in wildlife parks and endangered animals where rangers, scientists, and researchers can be alerted to stop illegal hunting and poaching. As AI develops further, more involved techniques for assisting wildlife and endangered species can be used.

Is facial recognition for animals working through AI?

Facial recognition technology is being used by police departments in Africa and around the world. AI facial recognition is assisting with the detection of individuals from different species which can be kept on file to assist rangers and keep track of the animals who are working and moving about among the wildlife parks. Facial recognition technology is being used to identify mammals of all species through their unique facial features (Larsen 2022).



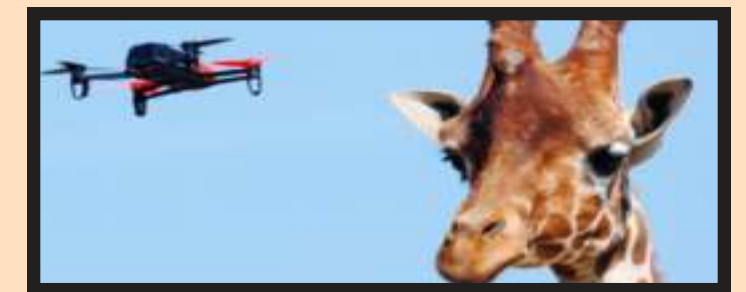
BBVA (2022) High Tech Ways to Monitor and Protect Threatened Wildlife



BBVA (2022) High-Tech Ways to Monitor and Protect Threatened Wildlife

Are drones proving to be capable of protecting animals from poachers?

Drones are being used and proving capable of tracking wildlife and showing rangers and scientists early on where animals are located. In Kenya, drones take many pictures of the miles and miles of national parks. These pictures are transmitted to the desktop of the ranger's showing wildlife and any vulnerabilities that might be in the park. Game counts can take place in each area which allows AI to assist in protection operations.



BBVA (2022) High-Tech Ways to Monitor and Protect Threatened Wildlife

Do drones have the range to follow animal herds on migration?

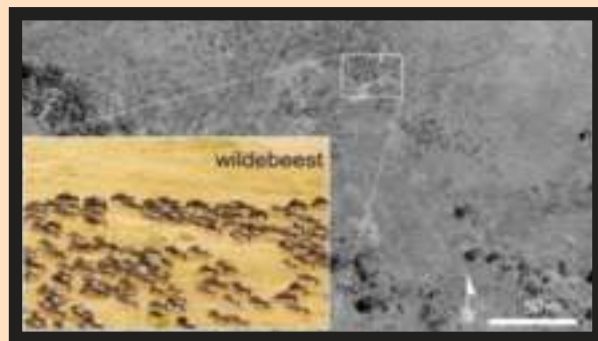
Migrating elephants can be tracked using drones. Wild elephants were captured by drone footage napping on a journey (BBC, 2021). Drones are seen as a powerful tool is being used for wildlife tracking (BBC, 2022). Drones count wildlife with greater accuracy than humans and can assist with data collecting on breeding and nesting sites.



Guardian News (2023) Elephants Napping



Wild Nature Institute (2019)



BBVA (2022) High Tech Ways to Monitor and Protect Threatened Wildlife

Can AI be used in conjunction with satellites?

Satellite footage uses high-resolution imagery to detect elephants, rhinos, whales, and many other endangered species throughout the world. Satellites in space are consistently scanning for information which will be a benefit for wildlife and endangered animals.

Continued use of drones and computer software allows AI to enrich and bolster conservation efforts. Endangered species can be seen from miles away, animals can be monitored. AI allows for large areas of protected space to be observed by scientists and rangers. Because much of AI is conducted from aerial searches, unmanned drones that contain high-resolution cameras can cover huge parkland. The camera can capture real-time data concerning the wildlife groups. If there is a change in animal numbers, migration patterns, or there are signs of poaching and illegal hunting, alerts through AI are sent.



BBVA(2022) High Tech Ways to Monitor and Protect Threatened Wildlife

In addition to AI and visual classification, sound recordings can pick up insects, birds, and mammals (Larsen, 2022). Scientists are collecting DNA from the environment where various species live. This has been ongoing for aquatic ecosystems for some time; however, the process is being used for land animals. Airborne DNA can be found to contain animal skin cells, saliva, hair, and other sources (Larsen, 2022). This process allows for detection even after an animal has left the area. It is considered much like a footprint that is left for scientists to classify and monitor species.

Visual Analysis for Case Study One

In the last 50 years, more than two-thirds of the earth's wildlife has disappeared primarily because of poaching, illegal hunting, and habitat loss. AI technology is proving to be a way of assisting scientists, rangers, and environmentalists.

Case Study – Two

Wildlife Management Institute, the Boone & Crockett Club

Wildlife poaching and illegal hunting has been decimating many animals which have become endangered. Why these animals continue to be hunted to extinction is a concern.

In 2020, in partnership with the Wildlife Management Institute, the Boone & Crockett Club initiated a study of illegal big game in the United States (Wildlife Management Institute, 2023). The goal of this study was to reveal to the public the difference between and to understand poachers vs. hunters, to significantly increase levels of detection and reporting of wildlife poaching, educating the public as to hunter base, in addition to judiciary on the costs of wildlife poaching. However, one important point that was considered is making sure the punishment fits the crime. This additionally means punishments need to be administered fairly.

The findings of this study demonstrated that landowners, hunters, and officers indicated that they considered illegal taking of big game and hunting to be a serious problem. The researchers found significant negative impact to wildlife populations, hunting, and access to land to hunt needed to be protected. A major finding was fewer than half of the individuals that witness illegal poaching events report them. Educating the public might be one way to assist with wildlife illegal hunting and wildlife reduction.

Should outside nations dictate what kind of punishment various countries deliver?

The Wildlife Management Institute along with the Boone & Crockett Club conducted their research in the United States. When considering endangered species in other parts of the world, different countries might consider different punishments. The last two remaining female northern white rhinos live in Kenya. Kenya is also home to lions, black rhinos, hippos, giraffe, and zebra. The national parks and reserves work tirelessly to keep the wildlife safe. However, in 2018 alone, 69 elephants and nine rhinos were killed (Dalton, 2019). Some countries are considering if stiffer penalties would save more animals.

The findings reviewed for Case Study Two demonstrate how poaching and illegal hunting prosecutions are assisting with endangered species protection. However, strict punishment is seen in varying degrees depending upon the country and governments which are involved.

Visual Analysis for Case Study Two

Wildlife conservation is a relatively modern social issue that became very popular with the Endangered Species Act of 1973. Painting and admiring wildlife has been popular throughout history; however, artists known for their interest in conservation began in the 20th century.

One iconic American artist known for a series of endangered species illustrated prints was Andy Warhol. In 1983, Warhol collaborated with conservationists and created a collection of portraits of animals. This collection captured near-extinct species and animals that are on the endangered species list. It is said Warhol loved animals and expressed his concerns over the tragedy of animals going extinct (ArtNet, 2019). Warhol's interest in the preservation of open spaces, natural resources, beach erosion, and endangered species can be seen in his art and the environmental subject matter of his art works (Garrison, 2018). Perhaps if Andy Warhol had lived longer, his artistic interest in endangered species would have grown and continued to bring attention to this topic through his art.

Warhol was asked to create a set of rainbow silkscreens that showed the various animals that were near extinction around the world. Andy Warhol created 10 prints based around three themes. 'Activism' explores the 1973 Endangered Species Act and inspired Warhol and his own love of animals and activism. A second series of prints titled 'Animals' focused on the African elephant, bald eagle, black rhinoceros, bighorn ram, giant panda, Grevy's zebra, orangutan, Pine Barrens Tree frog, San Francisco Silverspot butterfly, and the Siberian tiger (Bridges, 2023). These animals were chosen from a zoological and conservation standpoint. The third theme in Andy Warhol's series is titled 'Art', which provides insight into

Warhol's process and impact on American Art. Two pieces, The Bald Eagle and Rhinoceros were selected for this Visual Analysis as they both tie in with Case Study Two.

Did Warhol's popularity as an artist curtail poaching and illegal hunting through his art?

Warhol captured the spirit of near-extinct species. His collection of endangered animals has brought attention to the commitment to saving and preserving these creatures. Because of Andy Warhol's continued popularity, his audience is aware of the dangers of poaching and illegal hunting.

What makes Warhol's art useful in modern society to curtail poaching for endangered animals?

Andy Warhol's art continues to be endeared throughout the world. The selection of Warhol's Bald Eagle from his Endangered Species collection came about in 1983. He depicted the bald eagle representing the United States and the rhinoceros representing Africa as part of his collection.

The use of vivid colors on silkscreen is very much in keeping with Warhol's pop-art style. Warhol maintains popularity with many pop-art enthusiasts, in addition to an audience that appreciates his unique style and quirky personality. What is interesting is his varied collections can appeal to many different viewers. The Endangered Species Collection is an example in that many people who love animals might find this collection appealing. It crosses cultures and walks of life.

Warhol is encompassing with his visuals. They are bigger than life and bold. The colors and how Warhol uses them are vivid and enhance the image, the form of the animal, the majesty of his chosen species.

Compositionally, Andy Warhol always communicated his emotions through his art. In his endangered species collection, the illustrations are clear and concise. Warhol paints in harmony and a cohesiveness that speaks about the animal and allows the viewer to see and hear the beauty of these endangered animals. When one looks at the paintings done by Warhol for this collection, the viewer sees what Warhol was trying to convey.

Looking at the endangered species collection painted by Warhol, one sees a topic that continues to be current in our modern society. The colors and presentation are appealing and address the beauty of the animals. They continue as they were first painted by Warhol to need protection. Warhol's work for this collection is timeless.



National Museum of Wildlife Art (2017, Nov)
Andy Warhol Endangered Species Collection



National Museum of Wildlife Art (2017, Nov)
Andy Warhol Endangered Species Collection.

Case Study - Three

Local communities are being placed in charge of protecting endangered animals.

For years, poaching and illegal hunting have been an ongoing problem in Africa with great concern for the endangered species of elephants and rhinoceros, along with many other animals being considered critically endangered. .

Kruger National Park in South Africa spends more than \$13.5 million dollars annually on anti-poaching techniques (Fynn & Kolawole, 2020). This involves highly trained and dedicated law enforcement in Africa where dog tracker packs, helicopter support, and field rangers all work together. Although numbers seem to point to poaching being down, many researchers believe there are just less rhinos and elephants to poach.

Local communities complain they have had to deal with wildlife conflicts. Elephants damage crops and can injure people. Lions are seen killing people and livestock. This study looks at the residents who live amongst these animals. These individuals feel they are receiving the burden of conserving animals that can cause them harm.

Should the African government make decisions as to how to protect endangered species?

When considering this specific case, one is reminded of the class conflict theory that is seen in societies that struggle for goods and services. Carl Marx in his description labeled the 'conflict theory' to describe the struggle between different groups of people with limited resources. Marxism describes class conflict over economic resources, and those that wish to control others that do not have resources. Similar behavior between government, residents, and endangered animals are in conflict.

Can the farmer and wildlife live in harmony?

What is interesting concerning the idea that animals are encroaching upon local communities is a relatively new thought process. For generations, people lived among the elephants and rhinos,

lion, and zebras without conflict. Today, in a modern world where connection with the outside borders of societies has opened what is considered problems not linked to locals and animals, but instead government control of conservation. Local communities in this study are asked if they want trophy hunting in their area. Difficulties with decisions like this are not in the animals' best interest but become monetary in its influence.

Across most of Africa, governments are refusing to allow locals to make decisions on how to protect endangered species. The argument is that without protection for endangered species, poaching, illegal hunting, and trophy hunting will eventually decimate the animals in Africa.

To reduce poaching across Africa, increasing anti-poaching forces and the cost of protecting endangered species is paying off and is seen as being effective. There are always new laws and new techniques being introduced that can bring communities and animals as well as the government together.

Would crime syndicates run rampant if local farmers were in charge?

To identify and reflect on some elements to this case and study, Taylor (2021) shares how Tanzania, which was once referred to as the 'elephant killing fields' halted the worst ivory poaching within its borders. Tanzania has such high poaching taking place, that the elephant population was down 60% decline between 2009 and 2014 (Taylor, 2021). Tanzania has made more than 2,300 arrests of poachers and traffickers in a five-year period.

This amounted to more than 60,000 elephants, leaving the African Savanna elephant highly endangered. Because of AI, and anti-poaching taskforce work, criminal networks were targeted, less than a quarter the number of poaching incidents were reported in 2019. The outcome reported in Tanzania alone shows the elephant populations rising from 43,000 in 2014 to 60,000 in 2019. Consequently, anti-poaching and illegal hunting networks, along with conservation as a priority, is resulting in some rebound in areas where the elephants were being hunted to extinction.

Case Study Three discusses local interventions for possible deterrents for poaching, illegal hunting, and trophy hunting. When a viewer sees the outcome of poaching that was captured in the photograph on page 37 by Richard Fynn, the reality of this brutal practice becomes visually a reality. Once seen, it is never forgotten by anyone who cares about, loves, or wishes for future generations to appreciate and enjoy these animals.

How much damage to the environment takes place when elephants go extinct?

Elephants actively play an important role in creating forests which store atmospheric carbon and maintain the biodiversity of forests in Africa (Born, 2023). Research published in Proceedings of the National Academic of Sciences (PNAS) that if elephants become extinct, rainforests of central and west Africa which are the second largest rainforests on earth will lose six to nine percent of their ability to capture atmospheric carbon (para 3).

Trees in these forests are a mix of light wood which is low carbon density trees, and others are considered heavy wood which are high carbon density (Born, 2023). While low density trees grow quickly, high density trees do not. Elephants affect the abundance of these trees by feeding more heavily on the low carbon density trees which are filled with nutrients. This 'thins' the forest reducing completion among trees and provides light, space, and soil nutrients. All of this works together in a perfect plan designed and created by God to help the high carbon trees to flourish.

Elephants like to eat leaves from the trees; however, they do not damage trees when they eat. In addition, elephants disperse seeds of high carbon density trees which produce fruits which elephants eat. Elephants are gardeners found in the forest. They plant high carbon density trees and weed out the low carbon density trees. If elephants were to go extinct, the diversity of the forest would be forever destroyed.

If the African government does not intervene in the protection of elephants and elephants were eliminated from many areas of the forest and became extinct, there would be a major impact on the health of the rainforest in Africa. Ten million elephants once roamed freely across Africa. Today, there are less than 500,000 (Born, 2023). These elephants range from endangered to critically endangered with numbers falling by more than 80 percent in the last 30-plus years.

It is important for the government of Africa to continue to protect elephants under national and international law. Saving elephants will help save planet Earth and God's beautiful creation, the animals He designed from His own creativity.

Is protecting endangered animals of interest to younger generations?

It is important to educate children concerning conservation. African elephants are endangered and teaching children about preserving these animals for future generations is essential (Belcher & Shah, 2020). Teaching children about poaching and illegal hunting will assist with the preservation of the African elephants and other endangered species.

Should anyone with the money be allowed to trophy hunt?

Trophy hunting has been seen as a way for rich individuals to brag about themselves by murdering innocent animals. Trophy hunters use cruel and unsporting methods like bating and hounding which is a hunting tactic where packs of dogs pursue and exhaust frightened animals until they can go no further (Humane Society International, 2023). Trophy hunters pay large amounts of money to kill wild animals to display in their homes. Trophy hunting is harmful to the animals and conservation as the decline of animals is seriously being seen across the globe. By outlawing trophy hunting, 'watching tourism' will rise and can generate far more income to support conservation and provide far more jobs to local individuals everywhere (Humane Society International, 2023).

Summary of Findings

When considering the research which has been presented within this thesis, scientists as well as conservationists believe many animals that presently are on the critically endangered species list will soon become extinct if measures to protect these animals and stop poaching and illegal hunting is not successful.



Photograph by Richard Fynn taken from a helicopter while doing surveys in northern Botswana. Published in Mongabay (2020, Mar)

Chapter Three



Design Concepts

Chapter 3

Design Concepts

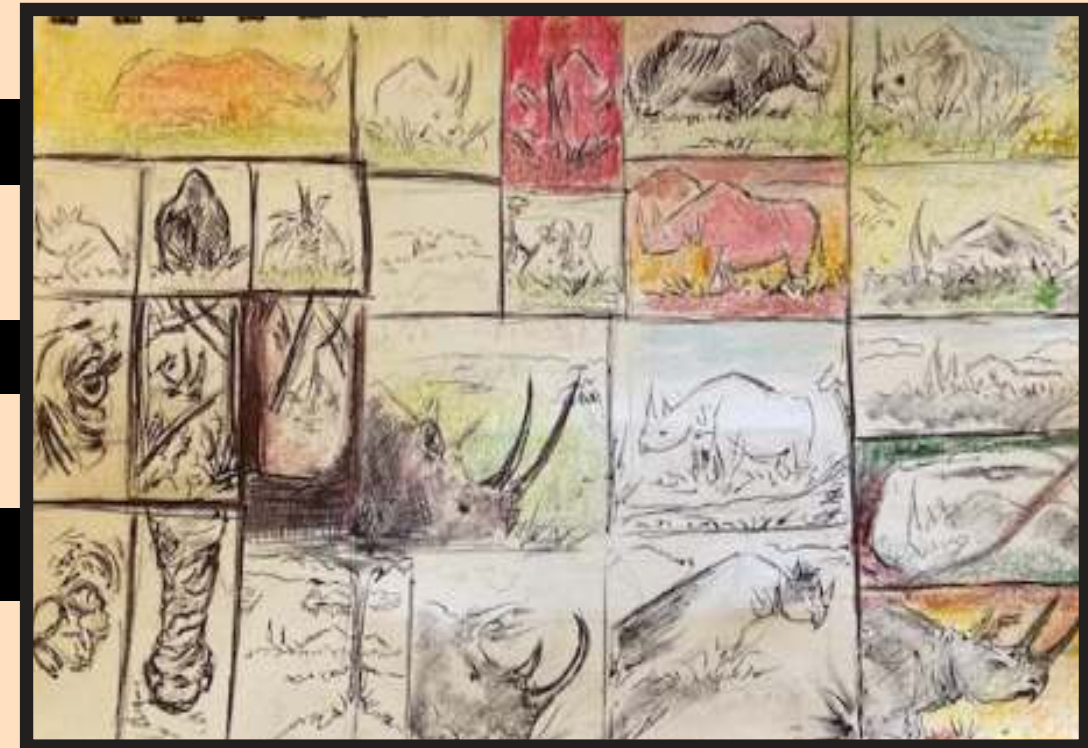
The process of design is highly creative and involves a great amount of research. As a designer and illustrator, I spend hours on ideas and how I might want an illustration to appear.

The process of rough drafts for elephants and the rhino were explored. Thumbnail drawings and rough illustrations are included per the thesis research.

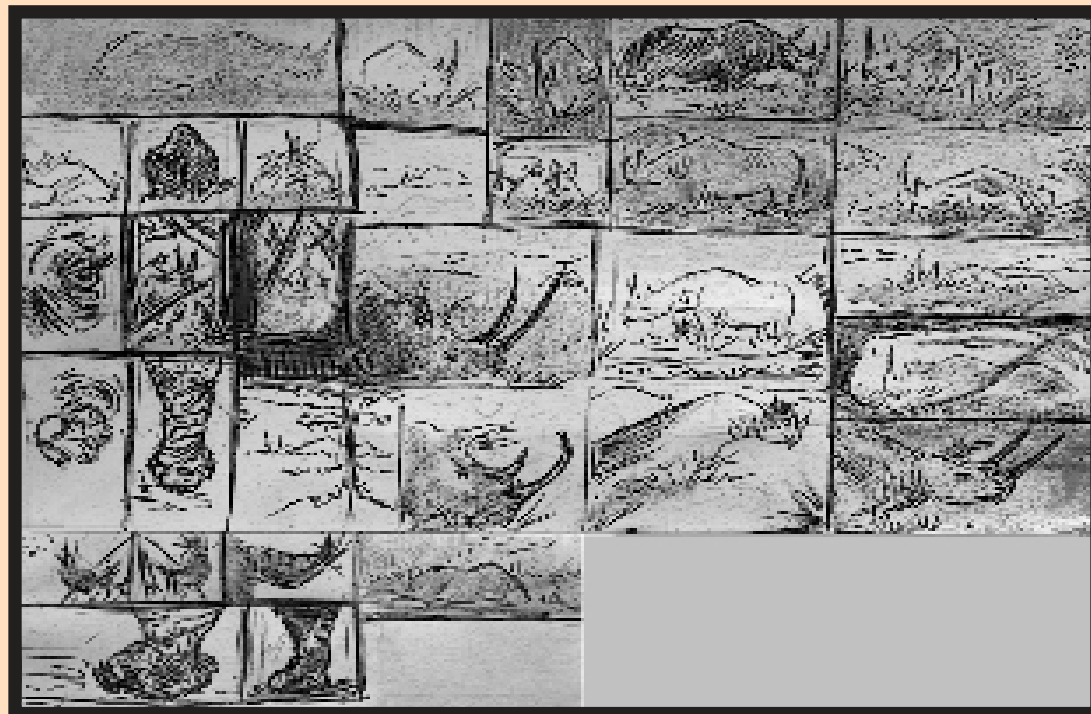
After researching endangered animals, I began sketching and illustrating the black rhino which is considered extinct in many of their home areas of Africa.

It should be noted that the white rhino is now extinct in Northern Africa; however, it is believed that a little over 20,000 white rhinos still exist in zoos throughout the world and five countries in Southern Africa (South Africa, Namibia, Kenya, Botswana, and Zimbabwe) still exist (World Wildlife Federation, 2023).

In 2011, the Western black rhino went extinct in its entire home range. Today, the black rhino still has small numbers living in Eastern and Southern Africa.



Black rhinoceros thumbnail sketches



Black rhinoceros rough sketches





Rough sketches were a part of the design concepts in order to provide styles of elephants and rhinos for the two children's books that I have decided to write and illustrate. These first two books which are a part of the thesis study will be the first in a series of books titled, *God's Endangered Animals* that I plan to write and illustrate.

I first worked with simple pencil sketches that were later enhanced with pens, colored markers, wax crayons, and water colored paints that were blended together to form landscapes that were later scanned into photoshop and reworked into digital illustrations.



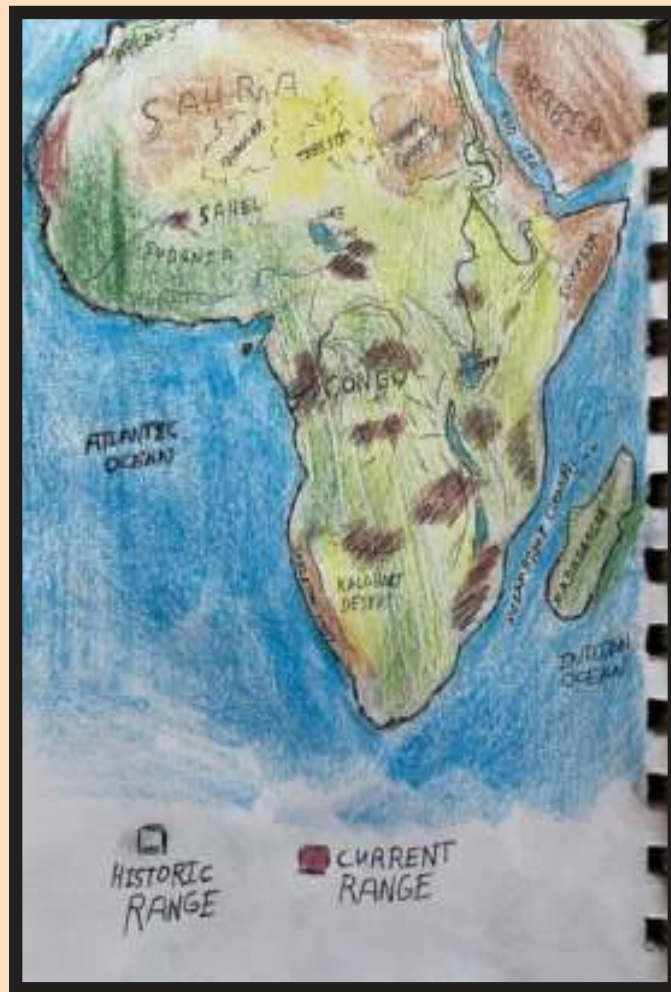


I developed this elephant illustration first as a larger design concept which was part of the Diane Disney Miller Exhibition in San Francisco,, California. I decided to reuse this elephant, as he translates well to being enlarged. This was the original illustration of the elephant. This elephant cover turned out to be very interesting in the respect that it could be recut, resized, and cropped multiple ways, almost like a photo negative. Not all illustrations can be turned into variants of the same art illustrations, much like in dancing where the male partner is the frame and is meant to show off his female counterpart as the canvas. The artist is required to show off the canvas. So with this mindset, I decided to just go for it and work this illustration in any particular way that seemed to fit its layout.



A vintage handdrawn map demonstrating where elephants once freely roamed was illustrated and researched. Once millions of African elephants lived and migrated in family groups throughout the continent of Africa. However, in our modern society, because of poaching and illegal hunting, the elephant population has dwindled to less than 500,000. For my final book, the continent of Africa will be presented and will speak to the plight of the elephant dwindling from once having millions to so few in our modern society.

The African map above depicts what is commonly believed to be the former home of the African elephant. The African elephant lived across most of the African Continent with exception to a few areas of Egypt along with certain parts of the Sahara.



The African elephant and Indian elephant, also referred to as the Asian elephant, much like the Black rhino of Africa is suffering from dwindling populations. These two illustrations were drawn by hand and finished in Photoshop and Illustrator. These designs show the former and current ranges of the African elephant and Asian elephant. The yellow demonstrates the original ranges of the Asian elephants from China across Southern Asia to Persia. Red designates the current natural range of this species.

To the right is the original map sketch of Asia, the Indian sub-continent, Indochina, and the Far East. The areas in yellow were the Asian elephants former range. The current range of the elephant is in red.



Additional research has been ongoing concerning the plight of the rhino. Originally, maps like the elephant maps were going to be developed in order take the methodology further; however, the rhino is presenting with such low numbers that there is not much research that is able to accurately provide numbers.

There are areas where the Sumatran and Javan rhino are critically endangered with less than 100 being left in the world (Ritchie, 2022). Referring to the literature review, because the rhino does not breed often, with a calf being produced perhaps every two and a half to five years with a gestation of 15 to 16 months, the rhino is not rallying back in many regions of the world.

Endangered African Wildlife – Rhinoceros



Preliminary illustrations were developed and inspired from the research review and from the rough sketches provided which demonstrate the beauty of these large animals. They were created to roam freely as part of God's creation, creativity, and imagination.

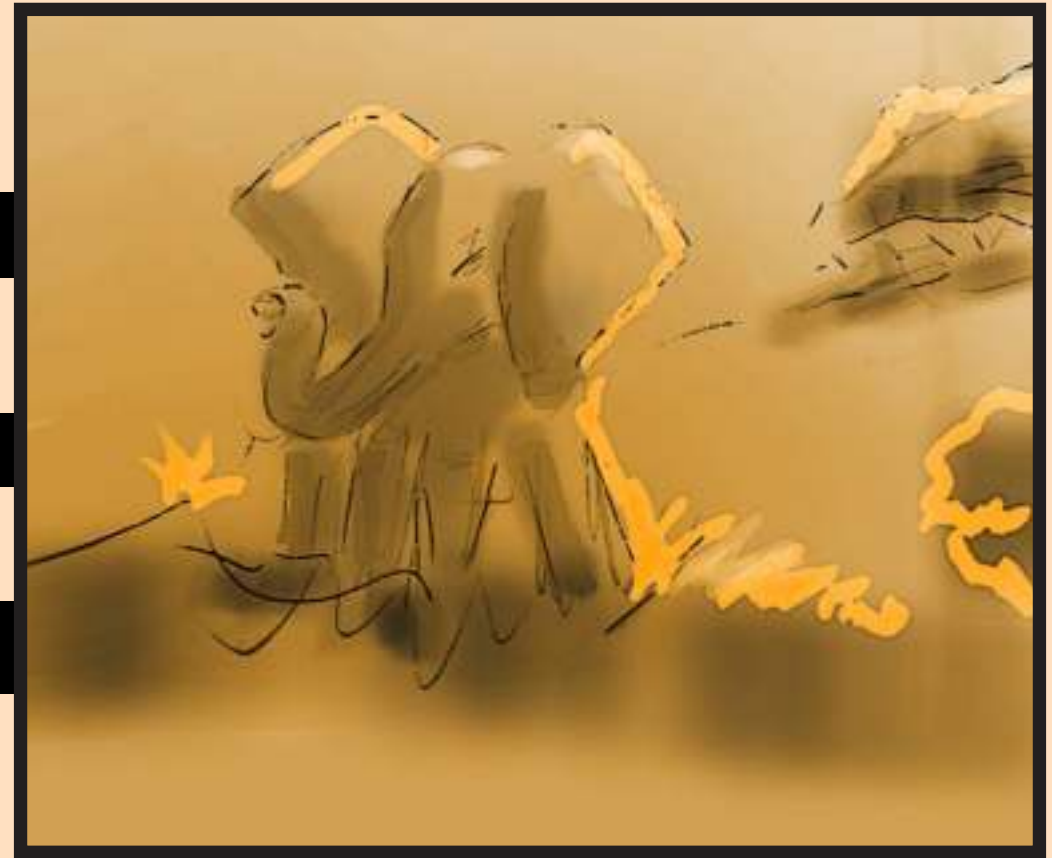
Throughout the thesis process, I explored fonts that would be appropriate and enhance my design decisions. For the written thesis, I decided on Book Antiqua, as this is a beautiful serif font, referred commonly today as a typeface, also known as a type font. Book Antiqua is considered a text font. It is eye-catching and easy to read.

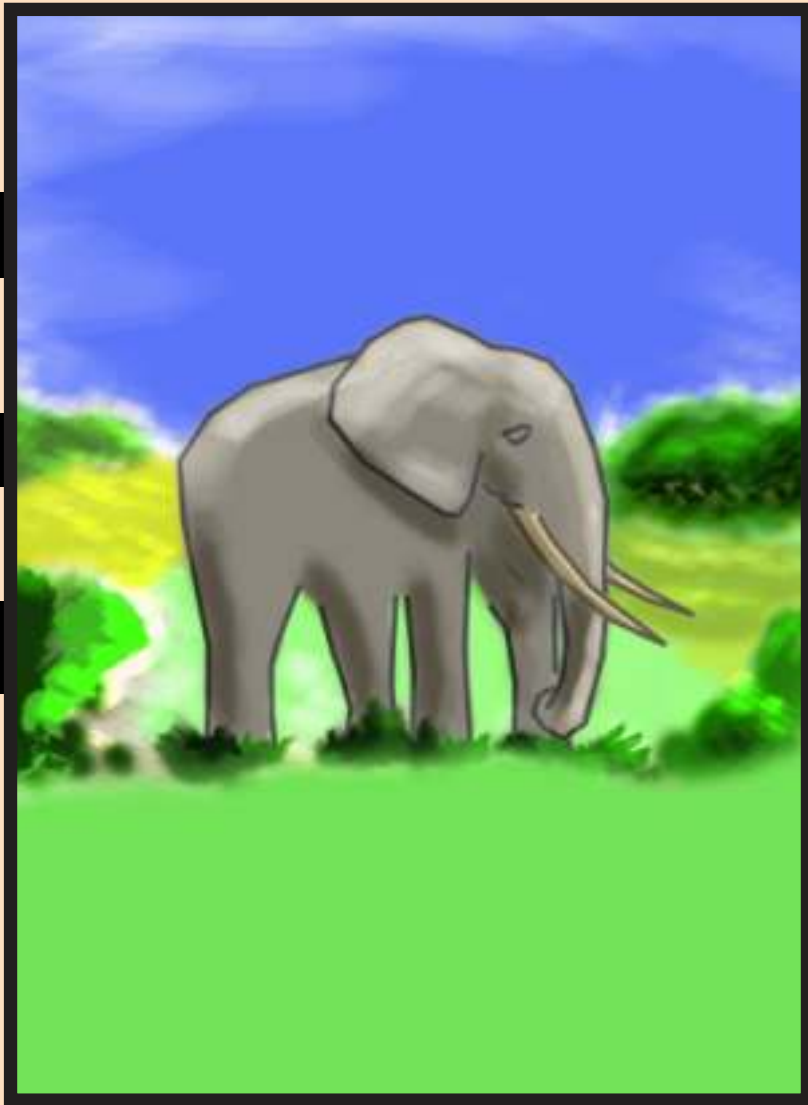
I decided to use Rum Raisin and Adelle for the children's books. Rum Raisin will be used for narratives, narration speech paragraphs, specifically pertaining to the book's narrator. The font Adelle will be used for the main body of the text within the books themselves.

There are two font type faces that were discarded. Onacona, a cute gaming font, and Jungle View, kids jungle display font. I was attracted to these two fonts at first because they were very pretty to look at, and very colorful. However they did not space out across the page as evenly as I wanted for this project, and thus were set aside.



The golden elephant and green elephant on the following page were completely different styles than the computerized version.. I was experimenting with many styles of design. I have friends with young children who very much liked these two illustrations. Consequently, I continued trying several different styles of design.

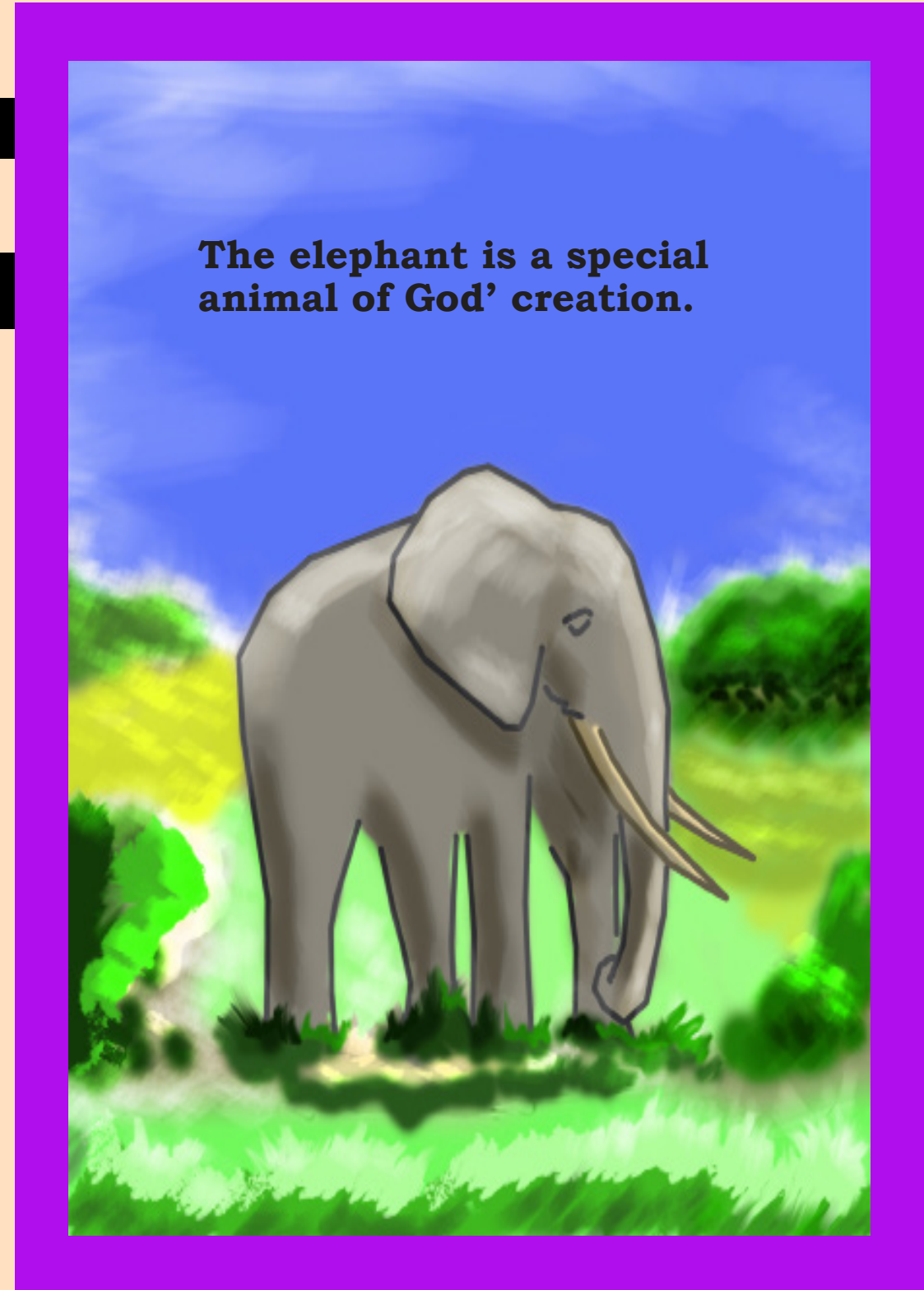


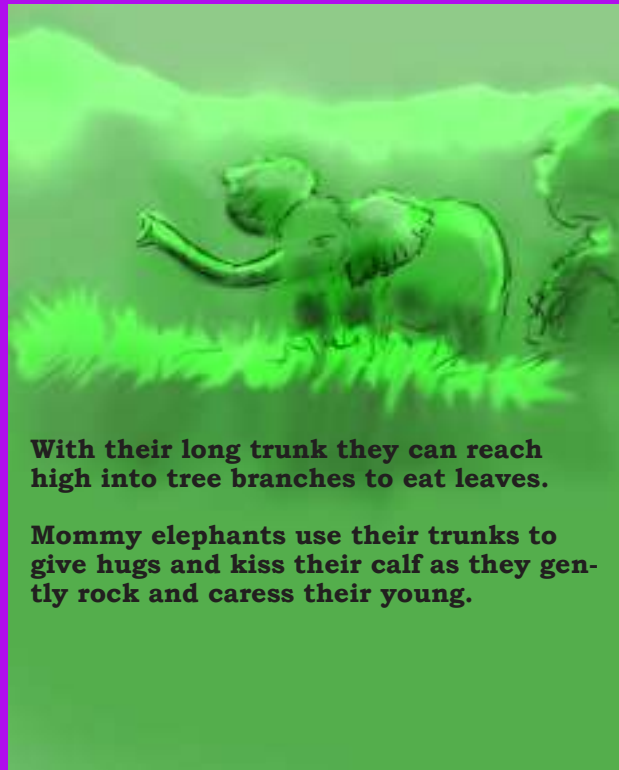


The first completed rendition of the book included written text, in addition to early design concepts and illustrations. These first designs are fully digitally painted. I illustrated these on the computer as my first finished product. However, after illustrating these concepts, I was not happy with the final appearance of the elephant and background.

My thoughts for the illustration above was for this to be the cover of the book. Digitally, the background and elephant did not reach out and grab me. The grass and bushes were not like my research and thoughts as to what the African grasslands would look like in appearance. This first design reminded me of an Easter card, only with an elephant. This was not what I wanted for my book. However, I did wish to continue this process and complete illustrations for this first storyboard. This would allow me to be fair with my process and final design decisions.

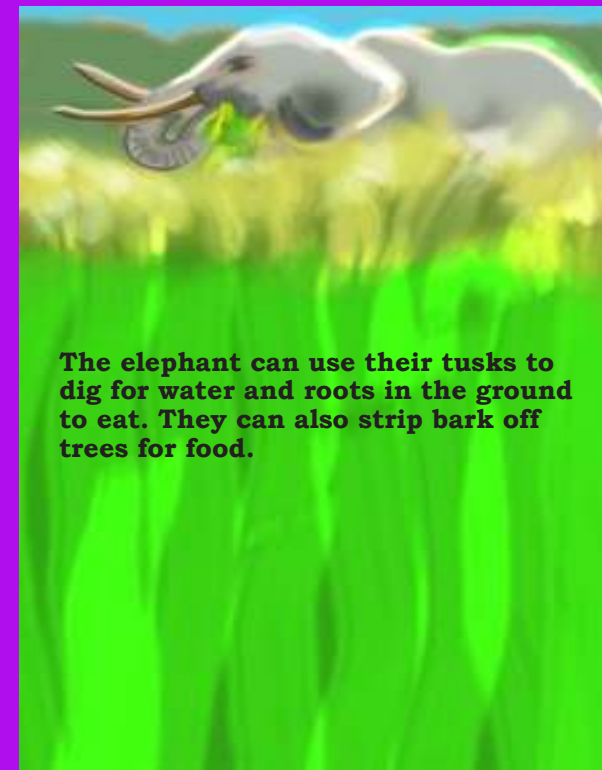
I decided that the computerized elephant could actually be used within the body of the book, and I would design a new cover. So, I moved the elephant from the cover to the first page of the book. It worked well at the time, especially with the reddish, violet border that complemented the violet, grayed blue backdrop that was mixed from scratch in Adobe Photoshop during the painting process. I liked this design, however, I wanted a higher level of detail and this first attempt was not jumping out for me.





With their long trunk they can reach high into tree branches to eat leaves.

Mommy elephants use their trunks to give hugs and kiss their calf as they gently rock and caress their young.



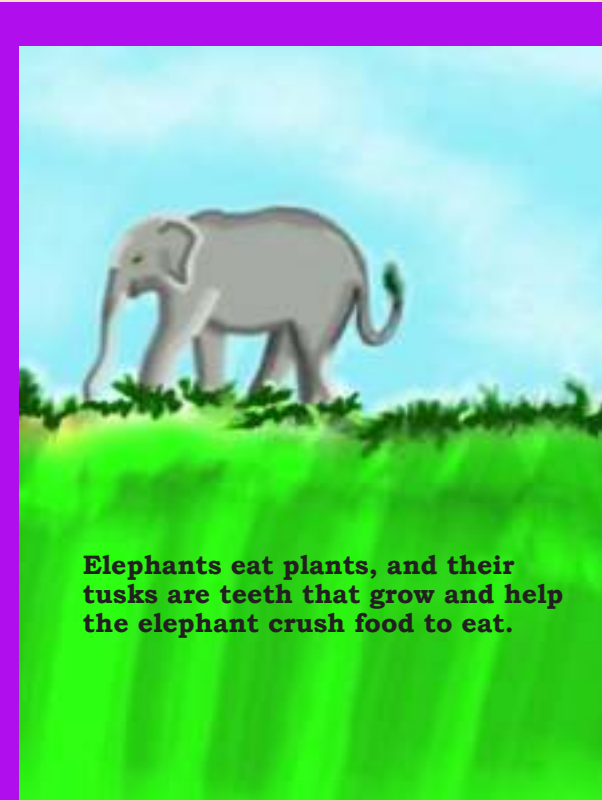
The elephant can use their tusks to dig for water and roots in the ground to eat. They can also strip bark off trees for food.



God also gave the elephant long ivory tusks that protect His beautiful animals.

As can be seen on these pages, I continued to experiment with a mix of styles. All of these designs were computerized, and it was obvious that although some were lovely, they were not detailed enough for what I wanted for this book.

The storyline was additionally my first attempt at writing the book. This storyline was not detailed enough to tell the story, and educate children and their parents about conservation, poaching, and the devastation this has caused.



Elephants eat plants, and their tusks are teeth that grow and help the elephant crush food to eat.



The elephant's tusks protect their very special trunk.

Their tusks are important tools that God gave the elephant.



Sadly, these ivory tusks are what make the elephant endangered.



Endangered means they are hunted by bad men who hurt the elephant for their ivory tusks.



It is important to protect the elephant from these bad men.



Just as the Bible commands, mankind should protect the elephant, not destroy God's creatures.



Educating children and their parents about conservation is important and needs to be handled through appropriate wording and design concepts. The illustrations showing a target on the elephant was a strong first approach, as I did not wish to paint the actual poacher as they come in many shapes and sizes. Furthermore, I did not want to scare children. The purpose of this book is to bring awareness of poaching and endangered animals. By educating children through the design process, they will be served and learn how to protect God's animals.



The elephant needs to remain safe with their family.

By being protected, the elephant will not always be endangered.

To conclude my first designs and storyboard thoughts for these early concepts, I began once again with a completely new script. From the new script, new designs, illustrations, and with far more detail.

For these new designs, I decided to work the way I usually work, which is researching what elephants actually look like. From there, I began freestyle sketching, in a style that was far more detailed, but still child friendly.

These designs excited me and spoke to me. I love working first on sketches and later dropping them into Photoshop for some final work.

Endangered Animals Series

The African Elephant

Hosted by Savanna the Conservationist and Adventurer

Hello Explorers!

My name is Savanna, and I am a conservationist. A conservationist is someone who works for the protection and preservation of the environment and wildlife.

Today, we are going on an adventure to the continent of Africa. A continent is a large mass of land much like where you live. It has cities, buildings, and families. The African continent also has lots of forest space filled with trees, grasslands, and all kinds of animals. Did you know that Africa is home to the largest animal that lives on land? Can you guess what it is?

The African Elephant

Let's learn more about the elephant, its family and some of the dangers they face. We will also learn how conservationists can help, and why it is important to protect all that God has created. Maybe you can be a conservationist, too!

Did you know elephants have long trunks that can reach high into trees to pull off leaves and strip away bark to eat? Tree bark is one of the elephant's favorite foods. It contains calcium and fibers which help the elephant stay healthy.

Elephants are very picky about what trees they eat from. They will only eat from the right trees to get the right nutrients.

Also, just like people, elephants live in families. The elephant family is called a herd. Baby elephants are called calves. Calves stay very close to their mothers and never wander far from the herd.

In addition to gathering food, mother elephants use their trunks to give hugs and kisses to their calves. They can gently rock and caress their babies.

Elephants are also important to many other animals that depend on them. Elephants walk many miles through the forest and grasslands. This opens pathways and allows plants to grow from the ground. The elephant digs in the soil which moves seeds around the ground for replanting, and the elephant can help keep waterholes open for other animals.

Why are African Elephants Endangered?

About 500 years ago, there were a lot of elephants living in Africa. Some scientists say there were more than 25 million. But every year, there are less and less. Today, conservationists believe there are only 415,000 elephants left in Africa.

There are so few elephants left that they are endangered. Endangered means they are an animal that might become extinct. That means there will no longer be any elephants left on planet Earth.

Why? A very special part of the elephant is their tusks. The hard white material is called ivory. Both male and female African elephants have tusks. The elephant's tusks grow bigger as they grow older, much like you get taller as you grow older.

These long tusks look like bone but are really two huge teeth that grow beyond the mouth of the elephant. With these tusks, the elephant can dig for water and tree roots, lift objects, and gather food. The tusks also protect the elephant's trunk.

Elephants have become endangered because there are humans who hurt and kill elephants for their tusks. These people are called poachers who come from all over the world.

Sadly, it is estimated about 100 African elephants are killed every day. This amounts to about 500 pounds of elephant tusks every year.

The elephant's tusks are beautiful. People pay a lot of money to buy these tusks to make them into ornaments, jewelry, and statues. It is illegal to buy elephant tusks, but some people and countries do not follow the law and are still allowing ivory tusks to be taken and sold.

Some poachers work in groups where they track and kill several elephants together. But some work alone. Those that work alone are harder to find and stop; because they are very careful to hide who they are. This makes it much harder to keep the elephants safe.

Because the African elephant lives in remote forest and grassland areas, the poachers can escape before rangers can be called or discover the fallen elephant.

How Can We Save the African Elephant?

It is important to think about wildlife conservation and protecting all wildlife from being overhunted. By protecting the animals of this earth, they will be able to roam freely and safely in their environments for many, many years.

You can help be a conservationist by knowing more and reading more about elephants. Remember that elephants were created by God just like you. They love their family just as you do. They take care of their babies and protect their young. Elephants are gentle creatures that do not harm anyone.

By protecting the African elephant, they can roam happily in the environment where they were born, and continue to keep their calves safe and protected, just as God intended.

Remember to give B. A. C. K. "Be A Conservation Kid!"

The End

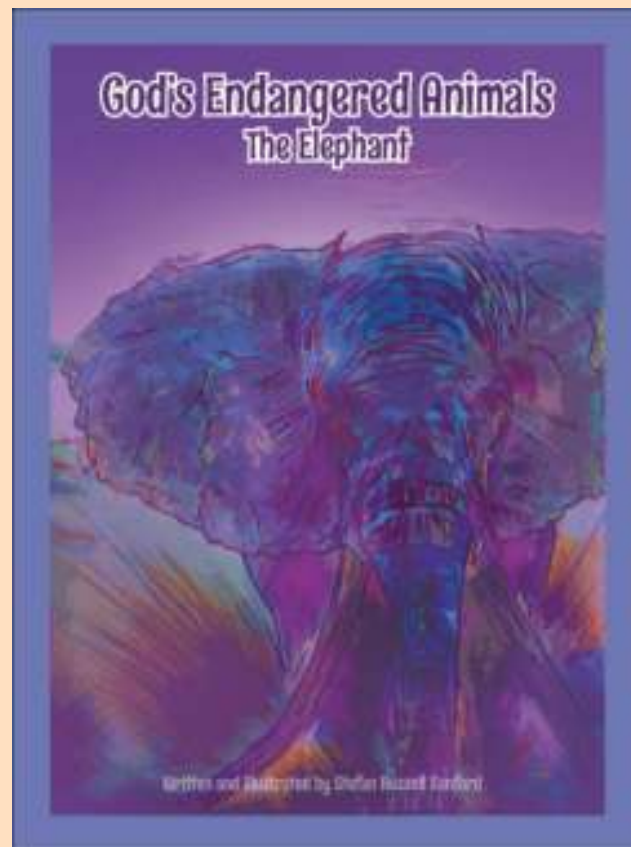
The elephant book that I am presenting includes new illustration styles and far more detailed text for the story and script. This version delves more deeply into the lives of elephants than the first story. For the final rendition of my children's book, I have introduced a narrator, Savanna, who was born and raised in Africa.

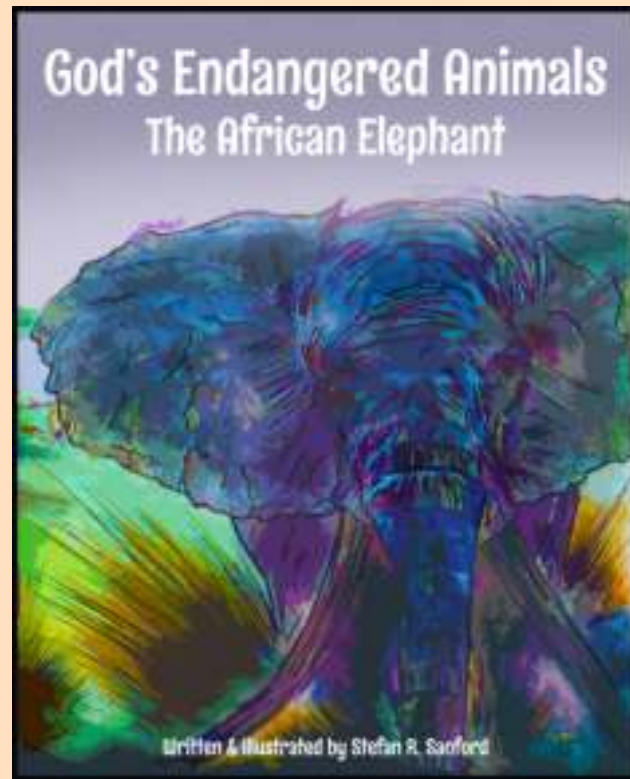
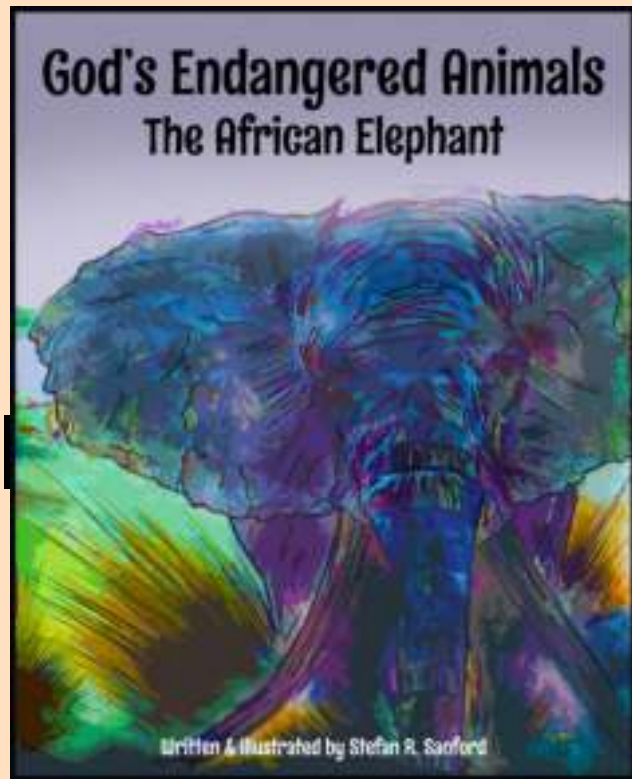
I chose to make Savanna of Mexican heritage, as I grew up and live in Arizona. I love the Mexican heritage and Arizona has a strong tie to Mexico through its people, architecture, and customs. Savanna's mother and father are both wildlife veterinarians who met in the States while working at the Arizona Phoenix Zoo. They later married and decided to move to San Diego where they worked for the Wild Animal Park. Following their time working with exotic animals at the San Diego Zoo, Savanna's mother and father moved to Africa to work on a preserve. Savanna was born in Africa and grew up learning how to be a conservationist. Her parents named her Savanna after the beautiful African grasslands surrounding them every day.

Savanna has become a very lovely character for the narrative of my two children's books. She is endearing and cute, telling the story of the elephant and rhino to young children. I feel strongly Savanna will be well liked and received by readers of all ages.

Educating children about conservation means telling them the story of how elephants live, how they are family oriented, and how much they love their families. Teaching children about conservation required showing and telling what poaching, illegal hunting, and what conservation is and what is required in order to save these beautiful animals for future generations to enjoy.

The following pages are the rough draft storyboard of the what has become the final book.



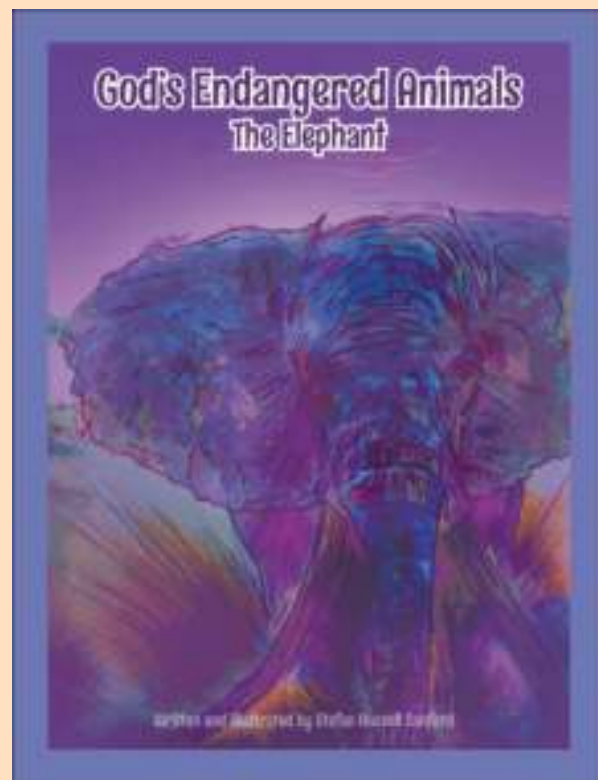
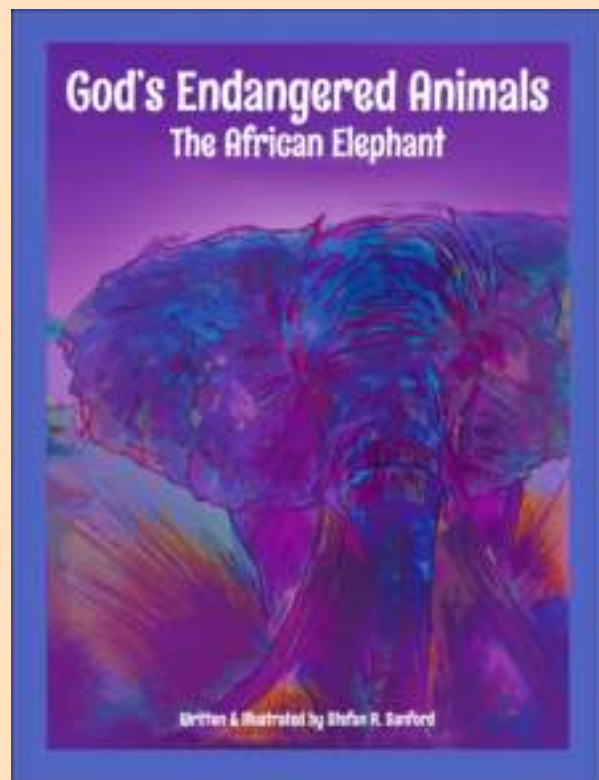
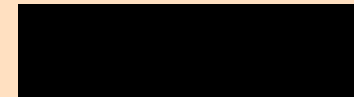


I wanted to design a few covers that could represent the children's book. Children love color, and I designed four covers that demonstrated the majesty of the African elephant.

The first two covers are the same African elephant with a little less reddish violet background. These were the first renditions for the children's book. The font is Rum Raisin.

The following two covers at the bottom of the preceding page have been painted with a reddish violet background. I have included a page border that emphasizes the illustration and feel creates a lovely cover that invites children to explore and want to learn about the African elephant as an endangered species.

Originally, I titled the book, *God's Endangered Animals: The Elephant*. However, because I am not delving into the Asian elephant, I retitled the title for the cover as *God's Endangered Animals: The African Elephant*.



God's Endangered Animals

The African Rhino

Hosted by Savanna the Conservationist and Adventurer

Hello Explorers!

My name is Savanna. I was born and raised in Africa where my parents are wildlife veterinarians and conservationists. A conservationist is someone who works for the protection and preservation of the environment and wildlife.

Africa is large and you can see mountains, grasslands, and forest spaces filled with trees, along with beautiful animals. There is a special animal that calls Africa home.

This Animal Is Called The Rhinoceros.

Rhinos are important to Africa's grasslands. These beautiful plant-eating animals will graze for hours. This maintains the structure of the vegetation and encourages new growth, which provides more food and areas for other animals to graze.

The rhinoceros has really, really, really, thick skin. Some people call it armor because it helps protect the rhinoceros. Even though it is super thick, it can get burned by the sun. The rhinoceros will roll around in the cool mud to protect their skin from the sun. The mud also protects their skin from insects.

Another special quality of the African rhino's appearance are the two horns that grow from its head. These horns are made from keratin which is the same thing your fingernails are made of. Rhino horns grow just like your nails do.

The rhino's horn is used for defending itself. Rhinos protect their baby calves from danger. Much like your mother takes care of you, the rhinoceros mother uses her horn to guide her calves, dig for water and break branches. In their natural environment, rhinoceros eat twigs, branches, leaves, grass, and shrubs. The rhinoceros is what scientists call an herbivore. Herbivores don't eat meat. They eat a variety of plants to grow big and strong.

About 150 years ago, scientists say more than a million rhinos lived in Africa. Today, scientists say only 27,000 rhinos remain in the wild.

There are so few rhinos left that they are endangered. Endangered means they are an animal that might become extinct. That means they will no longer live on planet earth.

Why is the Rhinoceros Endangered?

The rhinoceros has become endangered because there are people who hurt and kill the rhino for their horns. These people are called poachers. Poachers come from all over the world.

Scientists that study African wildlife believe two or three rhinos are killed every day. This is a lot of God's beautiful creations being taken from the world. If the poaching is not stopped, the rhinoceros could become extinct by the year 2036.

The rhino's horns are beautiful. People pay a lot of money to buy these horns to make ornaments. Many people believe the horns can heal them of diseases. It is illegal to buy rhinoceros horns, but some people and countries do not follow the law and are still allowing and paying people for these horns. The rhino horn is the most valuable item being sold on the black market. Black market means it is illegal to buy.

How Can We Save the Rhinoceros?

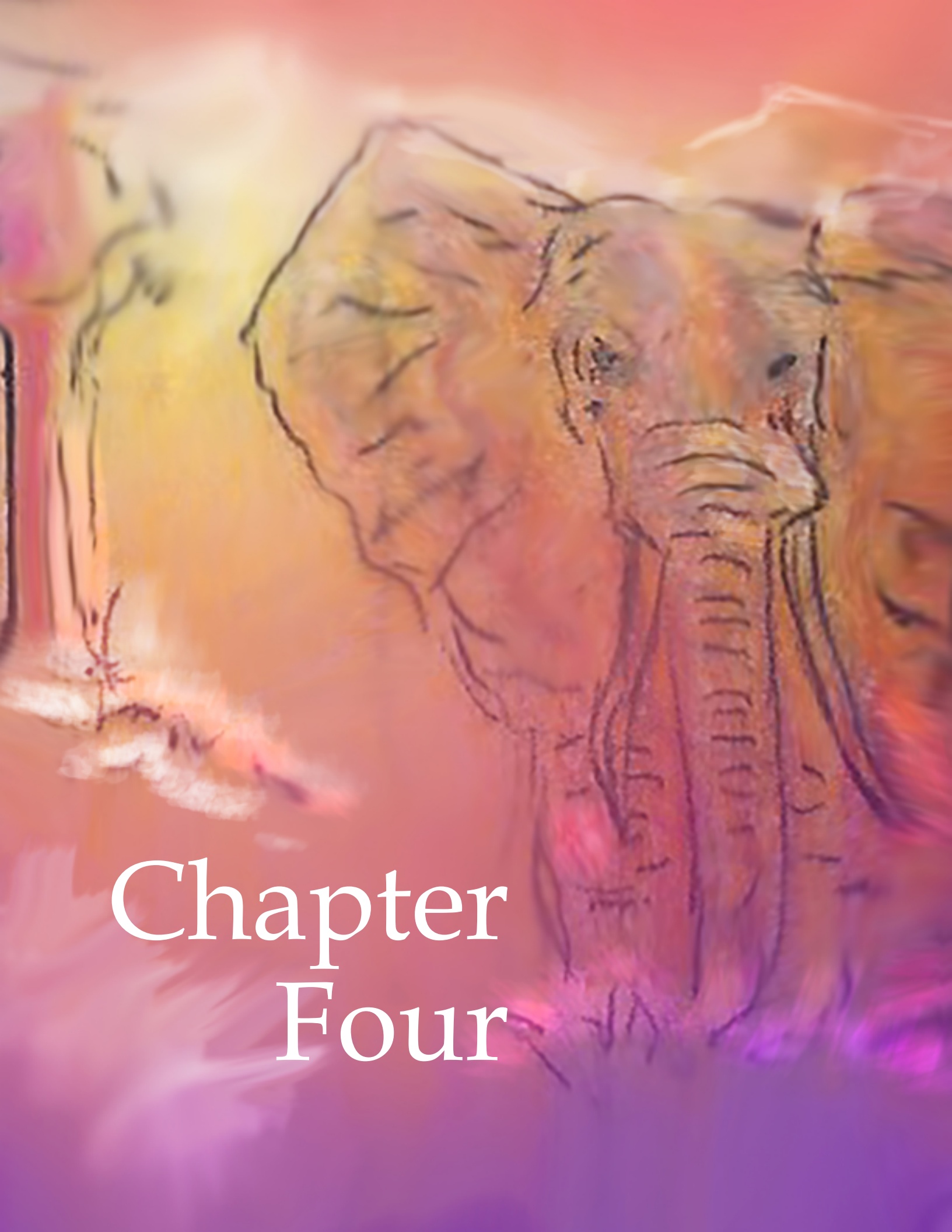
It is important to think about wildlife conservation and protecting the rhinoceros from becoming overhunted. By protecting the animals of this earth, they will be able to roam freely and safely in their environments for many, many years.

You can help be a conservationist by knowing and reading more about the rhinoceros. Remember that the rhino was created by God just like you. They love their baby calves and want to protect them.

By protecting the African rhinoceros from poachers, they can roam happily where they were born, and continue to keep their calves safe and protected, just as God intended.

Remember to give B. A. C. K. "Be A Conservation Kid!"

The End



Chapter Four



Deliverables

Chapter Four – Deliverables

Earlier in this thesis, poaching and illegal hunting have been discussed and researched to create a body of work that would demonstrate how exotic animals are becoming endangered. Critically endangered animals have been researched through peer-reviewed articles, research, and websites. Environmental groups, government programs, and scientists are working together to save many endangered species.

While research is building and expanding this topic, the need to educate younger generations about protecting and appreciating these animals is critical. It is young children growing up in our world who will decide to either carry on with allowing poaching and illegal hunting or decide on how protecting and saving these animals should and must prevail.

Through a series of children's books for very young children, ages two through seven, animals on the endangered species list have been studied. The first is the elephant, with the beautiful trunk and tusks that God created these splendid animals to use for eating and drinking, for caressing their young.

The second animal chosen is the rhinoceros, with its keratin horn that allows the rhino to protect themselves, digging for food, and digging for water. The rhino's horn is made of keratin which is the same material found in human hair and fingernails, rather than bone (Rhino News, 2023).

By educating young children about elephants and the rhinoceros, in addition to so many other endangered species they will learn how these animals live, and how God wants them to live. These children's books will additionally teach children what endangered means, how people hunt and hurt these animals, and how the Bible commands mankind to protect and respect His animals, His creation.

These two children's books will tie in with the research by showing how elephants and the rhinoceros take care of their young. These animals drink milk as young babies, and they stay with their mothers and family members for protection and guidance. God created these animals to be family focused, much like he did mankind.

God has created and made everything that lives on this earth. This does include the animals that walk and live among us. In Genesis 1:24, God said, "Let the land produce living creatures according to their kinds: the livestock, the creatures that move along the ground, and wild animals, each according to its kind" (New International Standard). Additionally, we are commanded to take care of the animals. In Proverbs 12:10 the Bible commands us to take care of the animals under and in our care. "The righteous care for the needs of their animals" (NIV Bible). In Exodus 23:4, God's word shares "If you come across your enemy's ox or donkey wandering off, be sure to return it" (NIV).

God's word says, that on the seventh day of the week, there should be a day of rest. If God is telling His people to rest, this also means that His animals should rest and refresh. According to Billy Graham (2016) the Bible says we must never treat any part of God's creation with contempt. When we do, we indirectly are treating our Creator with contempt. God calls us to be stewards and trustees of His creation, and the Bible reminds us that we are responsible to Him for the way we treat all (Billy Graham, 2010, Aug).

God created special environments on land and in the sea where these animals would thrive and grow. If God took the time to create habitats that would sustain His creatures, he certainly wants to see them live and enjoy it.



The above illustration was a large portrait that was used for Earth Day for the Diane Disney Miller Exhibition. I reused these two elephants as they truly have been well received and they speak clearly, showing the beauty of the elephant.

God's Endangered Animals

The African Elephant



Written and Illustrated by Stefan Russell Sanford



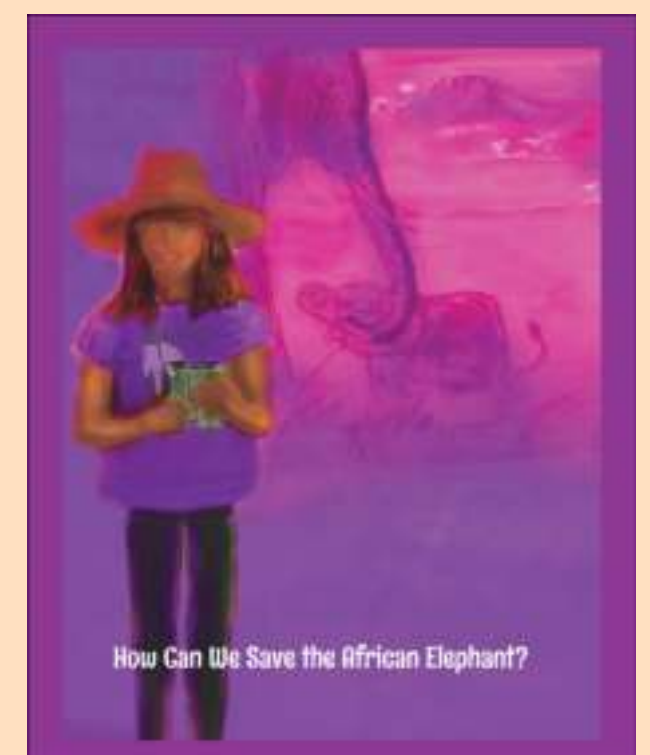
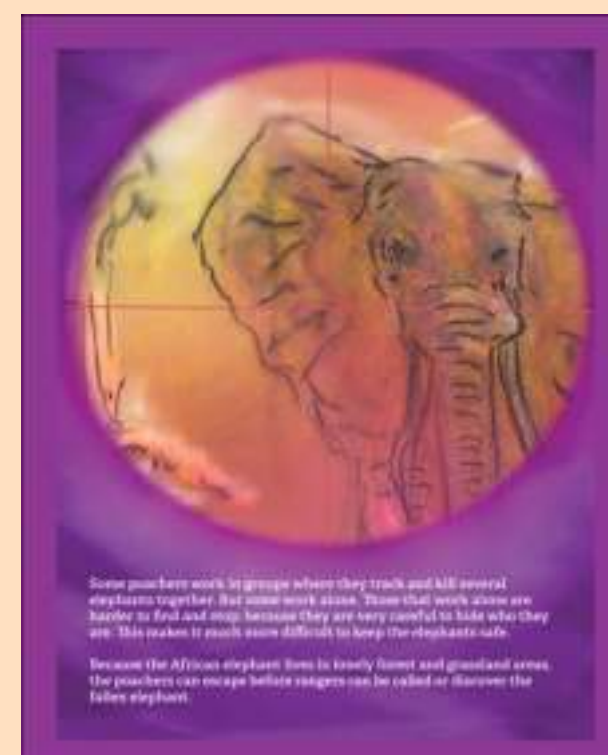
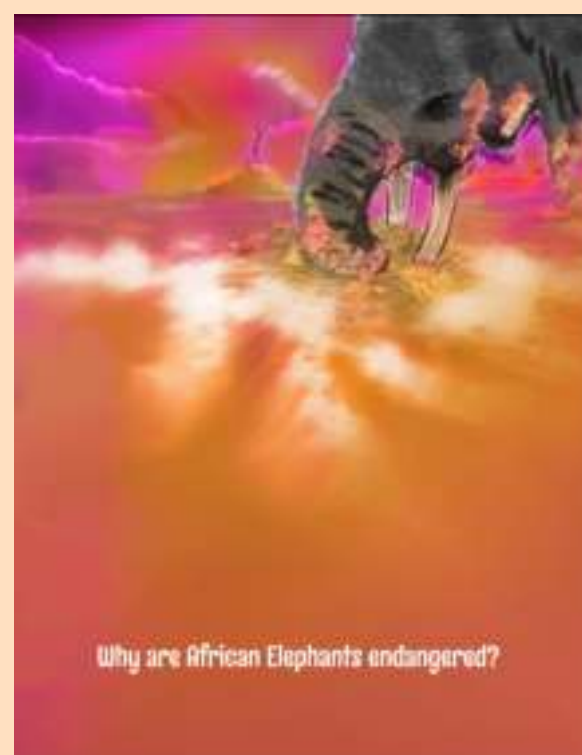
I thought it would be beneficial to include a character that could help in making this transition. A real person was chosen in the hopes that readers would relate to them better and understand that the basis of these stories is not fiction.

The first page of the story introduces Savanna. Savanna is the narrator and a young conservationist. The idea is that she will appear in each book and introduce friends as her adventures expand. She was developed specifically to help connect with the young audience.

Her backstory, if told in detail, would include her origins of Mexican American heritage and frequent travels abroad with her family. Unsurprisingly, Africa is one of her favorite destinations because she can be a part of the conservation effort to help endangered animals. Her heart is to spread God's love to everyone, including people and animals worldwide.

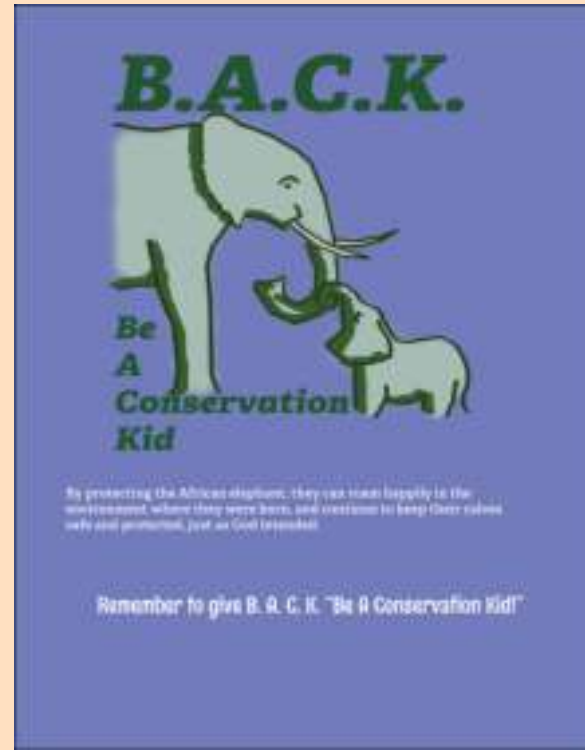
Savanna educates children about how elephants love to strip bark from trees. This provides nutrients! Furthermore, elephants love their babies and physically stroke their young, much like human beings.

Because of poaching, the tusks of elephants are stripped from the elephant and made into statues and other ornaments which are sold on the black market through the world.



The character of Savanna educates children on how the numbers of African elephants have gone down by the thousands, due to poaching. This has brought the elephant numbers to be considered highly endangered.

The character of Savanna educates children and their parents on how the elephant is targeted by poachers, and how children can help save the African elephant.



These pages and illustrations demonstrated the ivory trade and how elephants tusks can be made into statuers of various kinds. Poachers hunt and kill elephants for the ivory tusk, which is in such high demand. Savanna continues to educated little children about the dangers the elephant faces.

I designed a logo that can be presented on merchandise that children will enjoy exploring.
B. A. C. K. "Be A Conservation Kid"





Chapter Five



Possibilites

Chapter Five - Possibilities

The possibilities of educating young children through a series of children's books is certainly available and one I plan to expand upon. I desire to turn my passion for animals, especially endangered animals into a major part of my life's work.

When considering the topic of endangered animals, thoughts and decisions have risen to the surface of this research, inspiring design ideas and solutions.

The idea of writing a children's book series that focuses on bringing endangered animals to the hearts and minds of very young children became a priority. For the first book, I chose to focus on the African elephant. This animal is highly endangered. The elephant is the largest land animal walking among us.

For my second book, I chose a highly endangered animal, the African rhinoceros. This majestic creature is critically endangered from poaching and being killed for its horn, which is illegally and brutally removed and sold for huge profit throughout the world.

Eventually, more animals and books will be created. For example, Humpback whales live in oceans throughout the world, and travel long distances on yearly migrations, swimming as far as 5,000 miles from tropical breeding grounds to colder feeding grounds (NOAA, 2023). Before the moratorium on commercial whaling in 1985, all populations of humpback whales were primarily reduced by 95 percent (NOAA, 2023). It is important to educate young children about protecting these gentle giants of the deep that God created.

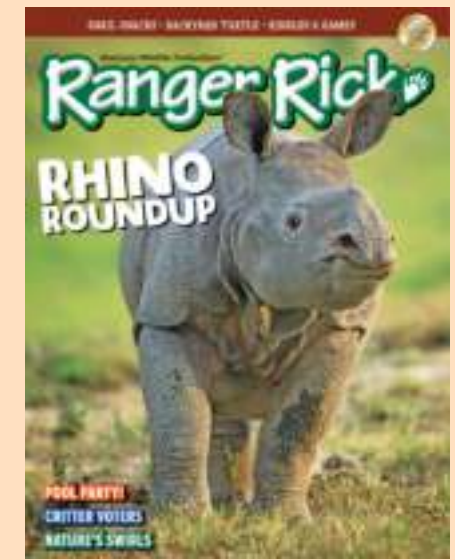
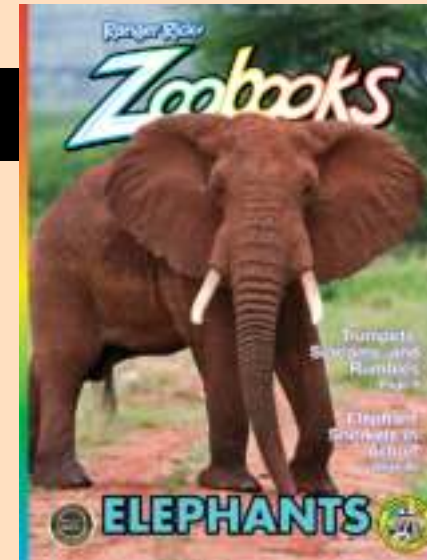
Whales and dolphins are being illegally hunted and poached for their meat for food, in addition to fish bait. Research by Minton et al. (2022) referred to in the Literature Review of this thesis, discusses the Atlantic humpback dolphin off the coastal Atlantic near Africa. These dolphins are easily captured, killed and used for shark bait, in addition to food for humans in some countries, which makes them targets. Illustrations are presented for dolphins and whales which are part of the research and literature review.

I plan on continuing my design process by writing several children's books, as I wish to develop an entire series. For me, it is important to draw attention to the endangered Vaquita porpoise. What is so unfortunate is, by the time I design, write, and publish a children's book about the Vaquita, it will no doubt truly be extinct, as there are only 10 left in the wild (NOAA, National Oceanic and Atmospheric Association, 2023).



Considering my children's books, I would like to address my thoughts for having these translated into other languages. They will be written in English; however, I was considering at some point adapting them into Spanish. I have grown up around and with the Spanish language. It is a beautiful language, and there are many Spanish speaking people living in the United States. In addition, I feel Savanna will appeal to many children, and she is of Spanish / Mexican heritage.

When I was a small child, I had a yearly subscription to the Ranger Rick Magazine. I was about five years of age when I first began reading Ranger Rick. It was sent to me by a friend of my mother, and I looked forward to it coming in the mail each month. My mother would sit with me and we would go through the entire magazine, looking at and discussing the photographs and pictures. As I began to read better myself, I would read out loud to my mother. The words and pictures came to life. The animals from all over the world were beautiful and I became passionate about knowing more about these creatures and protecting them. It was the Ranger Rick magazine, along with the Nature channel on PBS, that I learned about endangered animals, poaching, and illegal hunting. I grew up loving animals and wanting to be a conservationist.



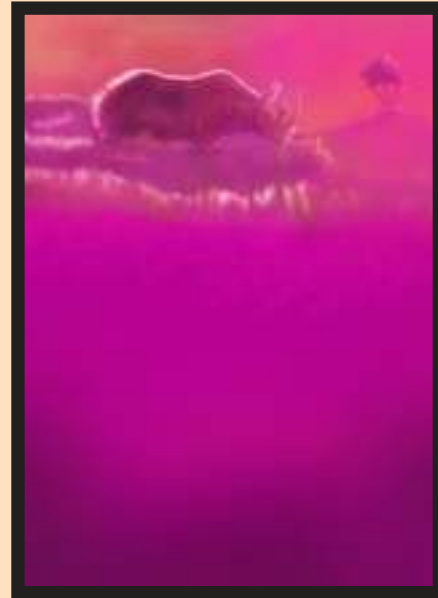
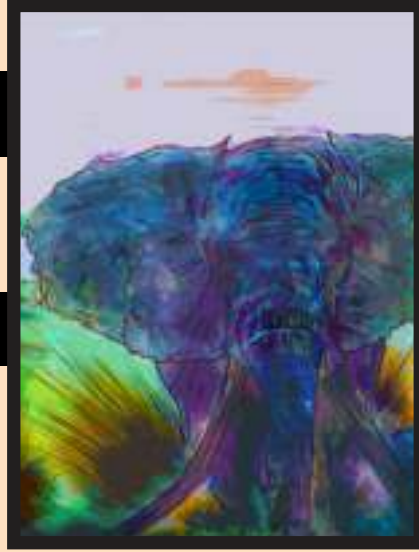
I would love to develop a magazine where I could write and illustrate information and articles about endangered animals. This would be wonderful for older children who have read my books, and move on to a magazine as they grow and want to learn more about endangered species.

Another possibility I have is to begin a blog on my website. This could discuss the plight of the various animals, how critically endangered they might be, if they are on the critically endangered list or endangered list, and what projections for saving them for future generations might be.

As an artist, I am honored to use my talents to increase conservation awareness further. Several of my air, land, and sea animal paintings will be included in the 2024 exhibition sponsored by Yavapai Community College in Prescott, Arizona.

This is a wonderful opportunity as I am excited to share my illustrations and designs, in addition to my passion and love for animals in this exhibition that will be open to the public, and posted online for many people to enjoy. It is a wonderful learning opportunity for individuals of all ages.

Here are a few paintings from my endangered animals collection that will be exhibited.



I have researched Christian publishing companies that accept unsolicited manuscripts for publication. One that I am very interested in reaching out to is Brave Book Publishing. Recently, because of the 'woke agenda' that is being seen throughout America and the world, Brave Books wishes to offer strong and creative Christian oriented content to children and their parents.

I feel strongly that my two books, and eventual series would be an asset to this publishing company, as my books offer children color, creativity, knowledge, and above all a Christian message that introduces young children and their parents to the world of God's Endangered Animals.

Another Christian publishing company I have found of interest is Zondervan Publishing. Zondervan has a division called WestBow Press that spreads the message of faith and love. WestBow accepts manuscripts for publishing review through their website at

A list of Christian publishing that accepts manuscripts.

Zondervan, Thomas Nelson, Tyndale House Publishers, Dancing with Bear Publishing, Kregel Publishing, Bethany House Publishers, Moody Publishers, Harpers-Collins Children's Books, Chronicle Books, Dove Christian Publishers, Crossway Books.

It is my prayer, that the Lord will guide me as I write, illustrate, and reach out to publishers that might be interested in my book series, God's Endangered Animals.

The following are examples for merchandise which include a logo for B. A. C. K. Be A Conservation Kid!

I plan to include these on my website where children can find these products in my personal store. I belong to a print-on-demand website that links to my personal store which can be fun for children and adults.



Children love Teddy Bears, especially when they have cute shirts with fun slogans! As little children learn about conservation, they will learn what B. A. C. K. means and can have a Teddy Bear to cuddle also.

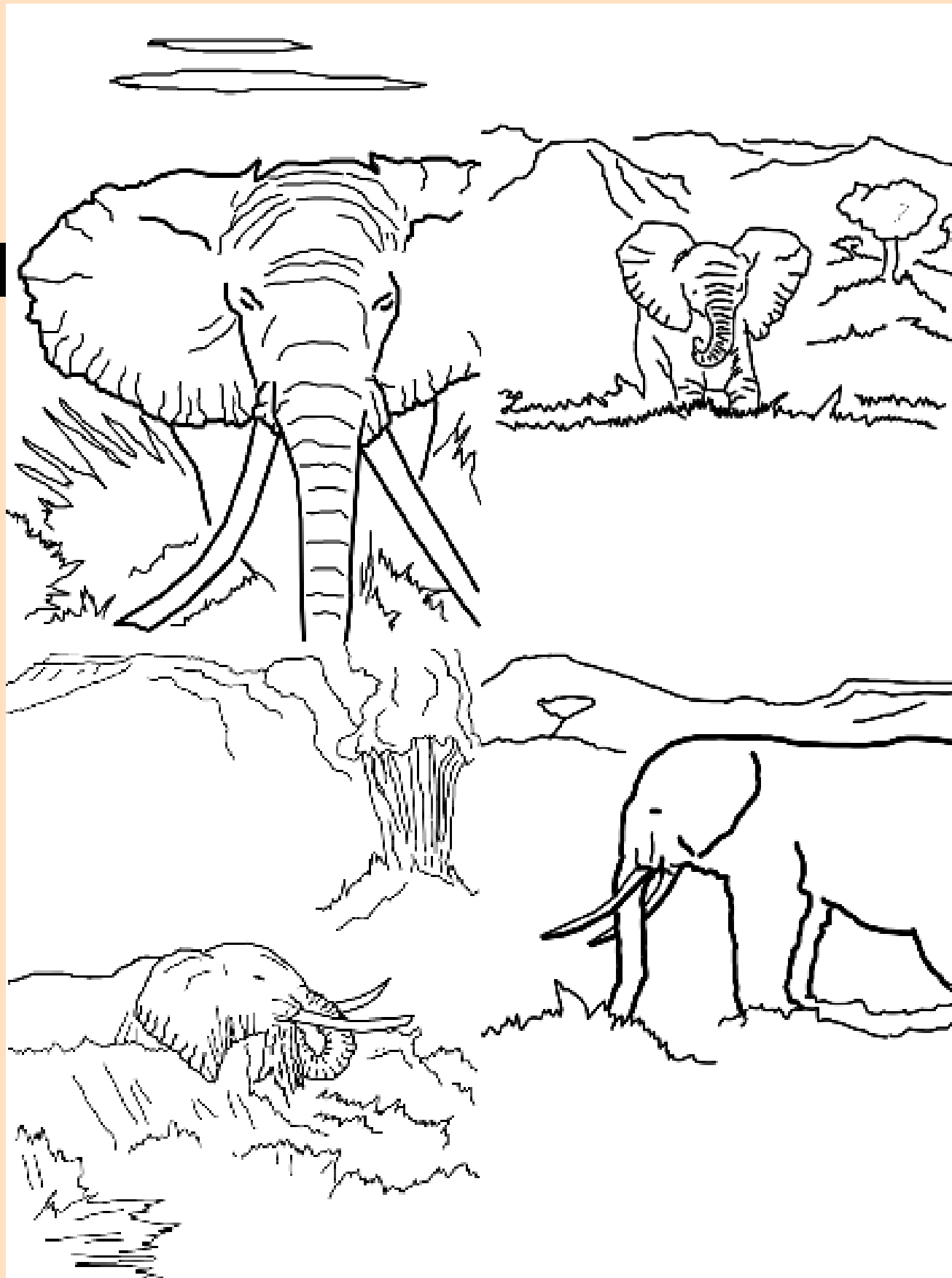
Spiral notebooks are fun for all ages! Children who are in school can show how they are conservationists by having a notebook with B. A. C. K. on the cover.



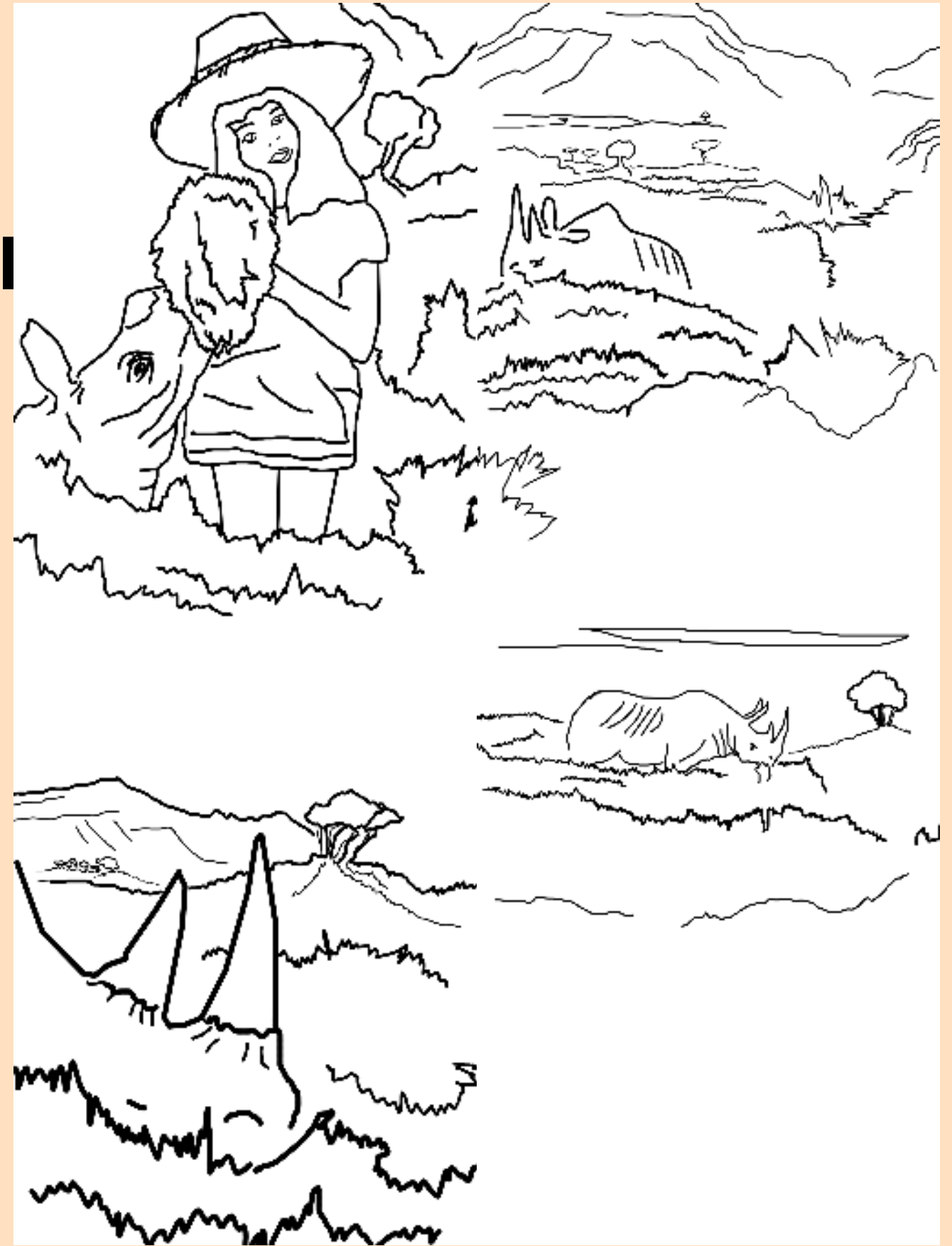
Book bags are handy, especially when they have B. A. C. K. with a elephant mother and baby. This canvas book bag that I feature in my store is also eco-friendly.

Everyone loves t-shirts that speak to an important social issue. Featured here is a child's t-shirt; however, this 100% cotton shirt comes in many sizes from babies to adult.

The African Elephant Coloring Book.



The African Rhinoceros Coloring Book.



Appendix

List and links for Visual Analysis included in the Case Studies

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